[From Franciscus Vallesius: Hippocrates. Coloniae, 1589.]

ANNALS OF MEDICAL HISTORY

New Series, Volume II May, 1930 Number 3

MEDICAL FRIENDSHIPS, CLUBS AND SOCIETIES*

By SIR HUMPHRY ROLLESTON, BART., G.C.V.O., K.C.B., M.D.

CAMBRIDGE, ENGLAND

THE opportunity of giving the Lecture founded as a memorial of John Young Walker MacAlister (1856–1925) naturally recalls the noticeable characteristics of this remarkable man, who thereby was able to do so much for the medical profession.

Of men who greatly influence the world by promoting progress there are two extremes: the strong man of the Juggernaut character who drives before him, if he does not trample on and, like a steamroller, flatten out those who do or might stand between him and his object; and the man who loving his fellows unites, leads, and educates them to march forward together as a band of brothers. Among medical leaders distinguished by their gracious humanity and rare genius of friendship a group of four may be mentioned: Conrad Gesner (1516–65) of Zürich; Thomas Browne (1605–1682) of Oxford and Norwich in the sixteenth and seventeenth centuries; in our own time William Osler (1849–1919) of Montreal, Philadelphia, Baltimore, and Oxford, who for more than half a century made Thomas Browne's "Religio Medici" his constant companion and often spoke of Gesner, who has been called his great prototype, as "a great friend"; and John MacAlister of London. Osler, being the friend of Gesner and Browne in the spirit and the contemporary of MacAlister, would appear to be the essential connecting link between them. Differing widely in their circumstances, these four, who being dead yet speak, illustrate some points perhaps worthy of consideration—manifest love for their fellow-men in the body and in the spirit, the association of this charity with a like affection for books, and the beneficial influence of medical clubs, societies, and libraries on professional life and progress. Inseparable from and indeed a slightly different way of expressing the same idea is the important part taken by kindly feeling and friendship in the evolution of medical team-work, clubs, societies, and associations, and so in the advance of our science and art.

---

* The third MacAlister Lecture, delivered June 20, 1929.

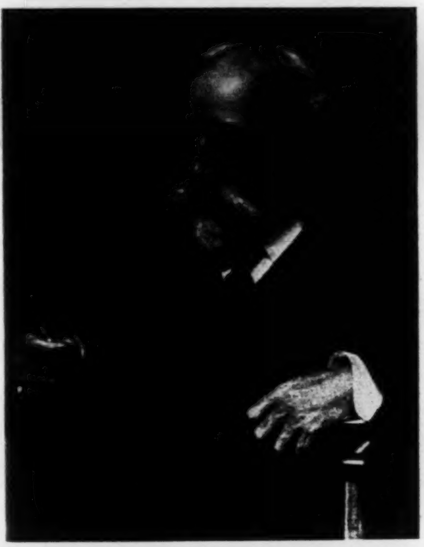


Fig. 1. John Young Walker MacAlister (1856–1925.)

Gesner, the senior and the shortest-lived of the quartet, was thus described by Henry Morley in his "Life of Girolamo Cardano of Milan, Physician" (2:152, 1854):

> He "kept open house there for all learned men who came into his neighbourhood. Gesner was not only the best naturalist among the scholars of his day, but of all men of that century he was the pattern man of letters. He was faultless in private life, assiduous in study, diligent in maintaining correspondence and good-will with learned men in all countries, hospitable—though his means were small—to every scholar that came into Zürich. Prompt to serve all, he was an editor of other men's volumes, a writer of prefaces for friends, a suggester to young writers of books on which they might engage themselves, and a great helper to them in the progress of their work. But still, while finding time for services to other men, he could produce as much out of his own study as though he had no part in the life beyond its walls."

Spoken of as the "German Pliny," he wrote books on philology, medicine, chemistry, the history of animals, and his "Bibliotheca Universalis" (1545–49) was taken by Osler as one of the models for his bio-bibliographical catalogue raisonné, the "Bibliotheca Osleriana," published in 1929. He was Professor of Natural History at Zürich for twenty-four years; the "Dictionnaire encyclopédique des sciences" gives a list of 39 works after his name, one of the last being on the method of treating the plague, to which he succumbed after devoting himself to its victims. Osler is reported to have said when showing his own Bibliotheca Prima to a friend and speaking of Gesner: "I am not sure that this fellow should go into Prima, but I love him so much that I must put him there. Besides he is the Father of Bibliography." Dibdin[1] spoke of "the learned and modest" Conrad Gesner's "Biographia" as "the first thing, since the discovery of the art of printing, which enabled the curious to become acquainted with the works of preceding authors," and considered him "the father of bibliography."

Sir Thomas Browne, after being at Winchester, was further educated at Broadgates Hall, afterwards Pembroke College, Oxford, which was also in the following century the home of Samuel Johnson, the friend of so many medical men and a biographer of Browne. After making the grand tour, he wrote the "Religio Medici"; but for the rest of his life was a home-loving philosopher with a wide circle of friends and correspondents, such as John Evelyn, the diarist, who visited him in 1671, John Aubrey the gossipy annalist, Elias Ashmole whose name liveth for ever in the older University, Sir William Dugdale, father-in-law of Ashmole, one of the most prolific writers and author of the monumental "Monasticon Anglicorum," Henry Power (1623–68) of Christ's College, Cambridge, who was a follower of Harvey in the experimental investigation of the circulation, Paston, and Nehemiah Grew (1641–1712), the botanist.

His letters, for like so many book-lovers he was a great correspondent, travelled widely over the fields of natural history, botany, chemistry, archaeology, and, like Gesner and Osler, his interest in living beings was not confined to man, for he was an able naturalist. There are one or two references to Gesner in Browne's "Vulgar Errors," but the late Sir Edmund Gosse[2] thought it strange that there are not more.

His appreciation of books was shown in a practical form by his subscription to the rebuilding of the library of Trinity College, Cambridge. Although for forty-five years he lived in the quiet back-water of the cathedral town, hardly ruffled by the Civil War, his early travels had made him cosmopolitan, and his philosophic life and writings teach us the lessons of, as Osler said, mastery of self, conscientious devotion to duty, and a deep interest in his fellowmen. He was careful to give his children the same advantages of foreign travel that years before he had enjoyed. He expressed his affection for men of other nationalities much in the same terms as Montaigne, and thus resembled Osler who in his desire to be described as "one that loves his fellow men" echoed the same charity.

About William Osler it is, for those fortunate enough to have known him, difficult to begin, and having done so to stop writing. He was a man of infinite variety, scholar-physician, teacher, humanist, and from a professional point of view perhaps greatest as a propagandist of public health measures. His friends knew ten years ago when this blithe spirit was called away that they could not hope to see his like again. Unconscious and thoughtless of self, he was in sympathy with young and old, and had the faculty of rapidly making friends and also, which is not a necessary corollary, of keeping them forever. Just as he loved living men, so did he feel affection for their written words, as is shown by the wonderful "Bibliotheca Osleriana" bequeathed to McGill University, Montreal; this *catalogue raisonné* of his library has been dutifully finished and recently (1929) brought out by his nephew, W. W. Francis. His long presidency of the Bibliographical Society also bears witness to his universal philanthropy. His affection for Conrad Gesner and for Thomas Browne, his "life-long mentor," has been already mentioned; both he and his brother Regius, the late Sir Clifford Allbutt (1836–1925), have been likened to Gesner for their humanity and encyclopaedic knowledge, and not unnaturally Osler has been compared with Sir Thomas Browne.

There is an Osler Society in Oxford, and in London the Osler Club was inaugurated on July 12, 1928 by students who knew Osler only by his written words, but keenly interested in medical history and in the collection of papers by and about him; it also contains a number of senior medical men. Osler was of course a member of many clubs and in 1910, with J. A. Nixon of Bristol, took an active part in making the arrangements for a small medico-historical club, the first in England, which he suggested might be called the Linacre Club. Probably the Section of the History of Medicine, which was created in 1912 at the Royal Society of Medicine, with Osler as its first President, largely took the place of this club which held its first regular meeting on May 3, 1911 when Osler was there, and its last in 1921.

John MacAlister, not being a physician, differed perhaps more from the other three than they did from each other except in point of time. Osler and he were contemporaries and, as will be seen from Cushing's Life of Sir William Osler and the contained letters, close friends. Though starting life with the intention of entering on the physic line, and for three years (1875–78) a medical student at Edinburgh, MacAlister was prevented by ill-health from qualifying, and became a librarian in 1878, successively at Liverpool, Leeds, and for a few months in 1887 in charge of the Gladstone Library of the National Liberal Club. But he became much more than this; after his election, on August 9, 1887, to the post of resident librarian to the old Royal Medical and Chirurgical Society, then at 53 Berners Street, which had a roll of 745 fellows, he soon made himself the organizer of the Society, and engineered its move to 20 Hanover Square, W. 1, in 1889. The history of the establishment of the Royal Society of Medicine and the amalgamation of seventeen medical societies with the Royal Medical and Chirurgical Society in 1907 are inseparable from, in fact are part of, MacAlister's life. As far back as 1893 he put a scheme of amalgamation before Sir Andrew Clark, (1826–1893) then President of the Royal Medical and Chirurgical Society, who backed it enthusiastically until his sudden death closed down this effort for years. It was not until 1905 that, as the result of Sir William Osler's encouragement, MacAlister again put forward the scheme, and then after Herculean labours carried it triumphantly through with the backing of Sir William Church and Sir Richard Douglas-Powell. The new Royal Society of Medicine moved from Hanover Square, first in March, 1910 to a temporary home at 15 Cavendish Square, W. 1, previously occupied by Sir Jonathan Hutchinson (1828–1913), and finally in May, 1912 to its present house specially constructed for it at 1 Wimpole Street. When he resigned in 1925, it had a roll of more than 4,000 fellows; but even then his ambition was not satisfied, for he had a plan, confessed but never accomplished, of uniting the two Royal Colleges, of Physicians and of Surgeons, with the Royal Society of Medicine. A remarkable feature of his career was that though the paid official of the Society he made for himself a position of friendly equality with the ever changing successions of honorary officers of the Society. With wise tact he got others to introduce and back up schemes of his fertile brain for the expansion and further activities of what really was his child, the Royal Society of Medicine. But while Librarian, Secretary and unpaid Editor of its voluminous transactions, he was much engaged in outside work, and thus increased the prestige of the Society without its ever suffering from want of his direction. In 1888 he founded *The Library* which he edited and ran at his own risk for ten years; he was honorary secretary, 1887–1897, of the Library Association, secretary of the second International Library Conference in London (1897), and was largely responsible for the School of Librarianship, where his services are kept green by a medal with his head and name upon it. As a librarian he was eminently practical and he was a skilled bookbinder. He excellently illustrated the combination, not always seen in men devoted to either object, of love of living men and the books of writers who have passed behind the veil.

His friends were innumerable and of the most varied kinds, and these he was always most anxious even impetuous to help, never sparing trouble or allowing any time to elapse. Careless of his own interests and much given to open-handed hospitality, he did much better for others than for himself; but his reward was in the hearts of many who feel that no one can ever quite take his place. Osler spoke of him as "the man who poked the fire," picturing men sitting in silence around a dismal fire in a wayside inn, and MacAlister at once saving the situation by creating a cheerful blaze and atmosphere. An admirable "mixer," he was prominent at the Savage Club, of which he was an honorary life member and to which he brought his friend Mark Twain to a memorable dinner under his chairmanship on June 9, 1899; he also belonged to the Bath, the Garrick, and the Athenaeum. At the time of the Armistice he was active in founding the Inter-allied Fellowship of Medicine for the Officers of the Dominion, American, and Allied troops then in London.

MEDICAL CLUBS

In London there are of course many social medical clubs, some for dining, others for bridge or (formerly) whist; but perhaps their names should not be too freely revealed, as after all they are of a private and family character. Their composition varies; in a few instances they are centred round the officers of an institution. At the Royal College of Surgeons of England there is the Council Club for members of the Council; the Royal College of Physicians of London has a Fellows' Club which dines about four times a year after meetings of the College, and by bringing together Fellows, especially the recently elected ones, carries out Harvey's exhortation "to continue in mutual love and affection amongst themselves." There is also an inner ring, of which Osler[3] wrote in 1905: "I went to London on Monday to the College Club, an old and unique organization among the Fellows of the College going back two hundred years. Very select (only 22 members) and most interesting." The United Hospitals Club keeps green the former close proximity and association of Guy's and St. Thomas's Hospitals, and does not, as the name might imply, include all the teaching hospitals as the United Hospitals Football and Cricket teams do. Founded on February 15, 1828 by two apothecaries, as general practitioners were then called, this Club consists of 9 general practitioners and 8 members of the staff of each of the two hospitals; it dines four times a year and has had 4 secretaries only, the average tenure of this important office being more than a quarter of a century. In some clubs the members are equally divided among physicians, surgeons, and general practitioners. One club was founded in order to meet a very distinguished member of the profession and was composed of fifteen medical and surgical consultants attached to teaching schools. At first it was known merely by its full number, fifteen, but after the death of its hero it became "The Samuel Wilks xv Club." Its history like that of the College Club (R.C.P.) just mentioned, has been privately printed.

There are naturally innumerable social clubs connected with medical schools and with special local associations; for instance, there is a small one "The Fountain Club" to remind those who in the days of their youth used to wait in the center of the Square for the arrival of the staff at a hospital near Smithfield. At a hospital at the other end of London there was once "The Pylorus Club" for these awaiting promotion to the permanent staff.

Social Medical Clubs in Edinburgh

Edinburgh has been rich in medical clubs of a convivial character, and some records of their joyful proceedings have been published; there is a collection, "College Lays," of 81 songs and verses by 8 medical members of the Aesculapian, Medico-chirurgical and other professional clubs.

Sir Robert Philip[4] has told us much about the Harveian Society, also called the Circulation Club, founded in 1782 with 23 members by Andrew Duncan, Senior (1744–1828), with the threefold intention of commemorating the discovery of the circulation, of promoting good-fellowship, and of fostering experimental research. He was the first president of the Harveian Society and its secretary for the long period of forty-six years, being promoted in 1815 to the Society's degree of Doctor of Mirth and Social Joy, three years after the degree of Doctor of Merriment had been solemnly conferred by the Society on its "Pontifex Maximus," Dr. William Moodie, the minister of St. Andrew's Parish Church. By Dr. J. D. Comrie's kindness I have been able to see the "Miscellaneous Poems extracted from the Records of the Circulation Club at Edinburgh," published in 1818 by Duncan who included in them a fragment of his own life written by him, as he says, "in Hudibrastic rhyme." Among the other verses in this volume the opening stanza of one may be quoted to convey the impression of youthfulness among these eminent Scottish sons of Aesculapius:

> Oh, a pleasant thing, surely, it is to get fees
> When so many hard struggles we have with
>   disease;
> But our cares would consume us, our lives
>   would destroy,
>   Did we not dub
>   Ourselves at the Club
> All Doctors of Mirth and of Social Joy.

The Aesculapian, originally a supper and subsequently a dining club, was founded on April 2, 1773 by Dr. Andrew Duncan, meets quarterly, and is composed of 22 members chosen from among the Fellows of the Royal Colleges of Physicians and Surgeons. Like some other clubs, the Aesculapian started with admirable intentions as regards education, for in 1777 a gold medal was proposed to be given for the best essay on some scientific subject; but this proposal died an early death in the following year, and no resurrection is on record. A favorite occupation was the making of bets in the form of magnums of punch or of claret, the latter being the maximum, and were "essentially an ingenious device by which the fluids necessary for the consumption of the party were provided by individuals" (Maclagen[5]). The bets were always, with the exception of Dr. Monro's extravagant wager of two melons to one, even bets, and most often were about golf. Fines, paid in like kind, were frequently inflicted for breaches of Aesculapian discipline. From time to time there were gymnastic conventions with competitions and prizes in golf, bowls, and swimming, and the three cups or *pocula* have attached medals signifying the winners' achievements. A remarkable feature of the club is the devotion of the Secretaries; for between 1773 and 1888 there were 5 only; the first Secretary, Dr. Andrew Duncan, Senior, held this office for fifty-four years from 1774 to 1827, and pulled up the average tenure of office to twenty-three years, thus approaching that of the United Hospitals Club. By Dr. Robert A. Fleming's courtesy I have had the privilege of seeing the printed Records of the Aesculapians. The truly indefatigable Andrew Duncan founded yet another club, the Gymnastic Club, which included the Sea-bathing Club. It has been said that this extremely clubbable man, to use Samuel Johnson's word, established these clubs "with the object of softening the asperities and jealousies which unfortunately from ancient times had been associated with the medical profession" (Thin[6]).

A more recent but now extinct club in Edinburgh was the Round Table Club which flourished from 1868 to 1895, and originally consisted of young men, no additional members being elected after 1876. Among them were Crum Brown, Thomas R. Fraser, Arthur Gamgee, William Rutherford, Douglas Argyll Robertson, Thomas Annandale, John Chiene, and of the 33 members (20 being the full complement at any one time) 11 were elected to university chairs, 7 were Fellows of the Royal Society, 5 Presidents of the Royal College of Surgeons, and 2 of the College of Physicians of Edinburgh. Joseph Bell, generally regarded as the model from whom Conan Doyle drew the character of Sherlock Holmes, was the first Secretary and kept the minutes for seventeen years. *The Annals of the Round Table Club,* which by Dr. J. D. Comrie's kindness I have seen, were published in a very limited edition (of 35 copies) in 1908 by John Gray McKendrick, Professor of Physiology at Glasgow from 1876 to 1906; they show that the Club was founded solely for good-fellowship and that it served a useful purpose by making warm friends of men who were rival competitors for posts in the Medical Faculty. The minutes of the dinners draw a good picture of the friendly chaff of the conversation; on one occasion it is noted that a member could not see a joke made by another until it was explained to him by the Secretary in an official manner.

SOCIAL MEDICAL CLUBS IN DUBLIN

In Dublin, as in London and Edinburgh, there are, as would naturally be expected, dining clubs; some are active now. Sir Charles Cameron's "History of the Royal College of Surgeons in Ireland"[7] contains some interesting details both as to names and their metamorphoses. The Medico-philosophical Society, about which Dr. Horace Law has most kindly given me much interesting information was founded in 1756. It is very appropriate that one of the moving spirits in its establishment was a Quaker, or more strictly speaking a member of the Society of Friends, Dr. John Rutty (1698–1775), an eccentric, and the author of "A Spiritual Diary and Soliloquies," the self-condemning entries in which greatly diverted Dr. Samuel Johnson. At first the Society was much engaged in the reading of papers, and by 1784 had listened to 230 essays, which are now stored in the Royal College of Physicians of Ireland. In the following year it underwent a radical change, altering its name to the Medical Society and the character of its meetings to a purely festive nature. In May 1831 it became extinct, to be revived in 1856 under its original name as a peripatetic dining club, sometimes jocularly dubbed the "Philo-oesophageals," their business proceedings being confined to reading the minutes of the previous meeting which merely recorded the locale of the dining room and the names of the banqueters. The membership was limited to 12 and among the original members were Sir Philip Crampton, Sir Henry Marsh, William Stokes, Sir William Wilde, the aurist and father of Oscar, and Jolliffe Tufnell. Subsequently the truly hospitable cosmopolitan spirit of the Club is shown by the names of Sir Henry Acland of Oxford, Sir James Paget of London and his brother George of Cambridge, and Sir James Reid of London. Another, "Our Club" or the "Rough and Ready," was founded in 1847 and never had a membership of more than 10. A third club of a dozen physicians and surgeons started in 1871 and dined together once a month, visiting for this purpose in the summer attractive places round Dublin. Like the other clubs, guests can be introduced, and at an extra dinner they entertained J. M. Charcot, Andrew Clark, and William MacCormac.

The want of a library, which would otherwise handicap a social-medical club, may to some extent be made good by the circulation of journals or books. There are of course some medical book clubs in which the social element takes a secondary and occasional place only. In Montreal, Philadelphia, and Baltimore, the three stopping places in his American pilgrimage, Osler organized foreign periodical or journal clubs. He was naturally a member of many medical clubs in the United States, such as the well-known Charaka Club, mainly composed of New York bibliophiles and famous for its publications, and the "Club of 19," of Philadelphia, founded in 1867 and now reduced to the number of the Apostles.

MEDICAL CLUBS AS THE PARENTS OF MEDICAL SOCIETIES

Medical clubs in which the object is the informal and private discussion of new work in a pre-publication stage, and consisting of members elected by a critical ballot, serve a very useful purpose, and flourish particularly in relation to special departments, such as laboratory work, cardiology, neurology, dermatology, diseases of children. Among surgeons there are clubs which visit each others' clinics or those of other countries. They of course combine with the educational the social factor and, by bringing workers in the same field together, strengthen the productive power of the science or special branch of medicine. From medical clubs of this kind it is only a step to medical societies with a formal constitution. This is illustrated by the history of Leeds Medical Club, which I owe to Professor J. Kay Jamieson's kindness. It was founded in 1862 by Clifford Allbutt, Wheelhouse and others, and held monthly meetings. The preamble in the minute book, now in the library of the Medical School, states that in the past medical societies had existed in Leeds but had become extinct; the Club therefore set out to avoid two apparent causes of such failure, namely a beginning on too ambitious lines and too great demands on the members for communications. The Club met until December 1872, when it adjourned *sine die* in favour of the Leeds and West Riding Medico-Chirurgical Society which flourishes to this day. The "Moorfields Club," which existed as far back as 1866 for the informal discussion of ophthalmological cases and problems, took the first steps in 1880 in originating the Ophthalmological Society.[8]

A transition between a Club and a Society is the Association of Physicians of Great Britain and Ireland started in 1907, largely as the result of the stimulus of the late Sir William Osler, and is much on the same lines as the Association of American Physicians, founded in 1886, of which Osler was President in 1895. It is composed of 250 members "actively engaged in the teaching of medicine or in research" and meets for two days once a year in University towns and in towns which are the seat of recognized medical schools in England, Scotland and Ireland, and as regards its numbers is unlike a club. On the other hand, though the *Quarterly Journal of Medicine*, which also began in 1907, is closely associated with the Association and is sent to every member, its proceedings are very briefly recorded and only in the *Journal;* one of the rules is: "No reporters shall be present, and no report of the proceedings shall be sent to journals or newspapers." Another rule dictates that "scientific communications shall be spoken, not read . . . Members shall be at liberty to publish their communications when and where they please." The President is elected annually by the medical men in the town where the meeting is held; as it happened the Association did not meet in Oxford until 1922, so that Osler was never its President. There is a similar Association of Surgeons also with a membership of 250, and the Pathological Society of Great Britain and Ireland, founded in 1906, has two meetings in the year. The *Journal of Pathology and Bacteriology*, started in 1893 by the late Sir German Sims Woodhead (1855–1921), is now its official journal.

MEDICAL SOCIETIES

The germ of medical societies in Great Britain should perhaps be regarded as the meetings beginning about 1649 in Oxford of "an experimental Philosophicall Clubbe" which was much the same as the Invisible or Philosophical College at Gresham College, out of which arose in 1662 the Royal Society, its *Philosophical Transactions* being evidence of its Oxford connection. Many of the early members, such as John Wallis, Thomas Willis, William Petty, Francis Glisson and George Ent, but by no means all, were physicians, and their object was science in which medicine was to a much greater extent than at present included; in fact there are more than a thousand medical papers, including those on anatomy and physiology, in the *Philosophical Transactions* of the Royal Society up to 1848. Except for these *Transactions* there were not any periodicals in which medical communications could appear until in the eighteenth-century medical clubs and societies arose and brought out the papers read before them. Medical journals followed and apparently were a development of the publications of medical societies; in a few instances a society after starting a publication died, but its offspring continued to instruct medical readers. Before the birth of medical journals the only means of publishing medical papers were pamphlets and books.

As Hingston Fox[9] pointed out, the earliest medical societies, as such in name, in Great Britain appear to have been small committees which collected and published medical papers, and in this respect Edinburgh certainly set an example to England. Alexander Monro *primus* (1697–1767) was secretary of a society in Edinburgh which between 1732 and 1743 published 5 volumes of *Medical Essays and Observations*, and in 1783 became the Royal Society of Edinburgh, thus showing that medical men and medical societies did much at this time in stimulating the more widespread study of science. John Fothergill, who when a student in 1735 was active in the Medical Society there, contributed to the last volume in 1743. Later, having practised as a physician in London since 1740, no doubt as a result of this experience in Edinburgh, he was one of the moving spirits, if not the chief, in the Society of Physicians which between 1753 and 1784 published six volumes of *Medical Observations and Inquiries* (vide p. 260). Andrew Duncan Sr., whose wonderful activities in connection with Edinburgh clubs have already been mentioned, was also Secretary of a Society of Physicians which published *Medical and Philosophical Commentaries* from 1773 to 1795, after which date under the changed name of *Annals of Medicine* they continued under the editorship of the two Andrew Duncans, father and son, until 1804, when they became *The Edinburgh Medical and Surgical Journal* under the editorship of Andrew Duncan, the Younger (1773–1832), and eventually the present *Edinburgh Medical Journal*. The literary activity of the two Societies founded by Andrew Duncan seems to have soon rapidly overshadowed any social proceedings. Andrew Duncan, the Elder, took a leading part in the foundation of the Edinburgh Medico-Chirurgical Society and was its first president in 1821. Hingston Fox also mentions a "Physical Society" (1771) and an earlier "Chirurgo-Physical Society" (1778) in Edinburgh. As shown later on, "The Glasgow Medical Society" (1814) followed, certainly in time and presumably the example set by, the Glasgow University Medico-Chirurgical Society started by the students in 1802.

A complete history of medical societies, past and present, in London does not exist; but reference for information to those which are ancient and now extinct may be made to J. F. Clarke's "Autobiographical Recollections of the Medical Profession," 1874, and for further information to J. B. Bailey's articles[10] in connection with the Meeting of the British Medical Association in London in 1895. In 1767, on the initiative of William Heberden the Elder (1710–1802), the Royal College of Physicians of London (founded in 1518) held meetings for the reading of papers, among others by Heberden, Sir George Baker, Richard and Pelham Warren, which were published as 6 volumes of *Medical Transactions* between 1768 and 1820. One of the earliest examples of team work was that projected on rickets in 1645 by 9 Fellows of the College: Glisson, Sheaf, Bate, Regemorter, Wright, N. Paget, Jonathan Goddard, and Trench all of whom were members of a private society for the improvement of themselves and their profession. They communicated to each other their observations on the disease, and it was arranged that Glisson, Bate and Regemorter should each be responsible for a part of the work. Eventually, however, the others deputed Francis Glisson (1597–1677) to write the whole of the "Tractatus de Rachitide sive Morbo Puerili" (1650) in 416 pages, which has been described as "one of the glories of English medicine."

In the second half of the eighteenth century institutions and societies for all manner of subjects were the rage, and now for the first time medical or, as they were sometimes called, physical societies appeared in London and also in the provinces. Except for its survival in the title of the Pupils' Physical Society of Guy's Hospital, the adjective physical has now lost its original association with medicine, and those unfamiliar with the old-fashioned phrase "the physic line" for the profession of healing and the Regius Professorship of Physic at Cambridge founded in 1540 by Henry VIII might easily be puzzled or take it for granted that these physical societies were concerned with the more exact science of physics instead of its more human and singular sister physic. The various medical societies started in London in the latter part of the eighteenth century often had somewhat similar names, and hence when one died of inanition a surviving one with a like name may easily be thought to be the same.

John Hunter (1728–1793) played an inspiring part in connection with the metropolitan societies; in 1783 together with Dr. George Fordyce (1736–1802) he founded The Society for the Improvement of Medical and Chirurgical Knowledge, which originally consisted of 9 members with a provision for expansion to 12, so that except in name and the publication of three volumes of *Transactions* it was a club; indeed after the issue of the last volume it existed only as a dining club and was formally dissolved in 1818. In January 1785 the Lyceum Medicum Londinense was started under the patronage of John Hunter and George Fordyce, and met in Hunter's lecture room in Castle Street, Leicester Square; it had about 350 members divided into three classes, the second and third being students; its active life lasted about twenty years, and in 1809 its members were transferred to the Westminster Medical Society. Fordyce wrote "A Treatise on the Digestion of Food" and was remarkable for his practice of having one meal only in the day at 4 P.M.; but this was gargantuan, went on for an hour and a half, and included a pound and a half of rump steak, a *bonne bouche*, such as half a boiled chicken or a plate of fish, a tankard of strong ale, a quarter of a pint o brandy, and a bottle of port. It is hardly surprising that he suffered much from gout with excruciating abdominal pain. Fond of society, he would for this reason dispense with sleep, and sometimes lectured for three consecutive hours without having undressed on the previous night.

As was not unnatural, more than one of the early societies had much the same name as the present Medical Society of London. There was another medical society established in 1752 with the object of collecting and publishing observations, especially of unsuccessful cases, "accounts of errors in the cure of diseases" and mistakes in diagnosis; between 1753 and 1784 its 6 volumes of "Medical observations and Inquiries by a Society of Physicians in London," sometimes spoken of as "the Medical Society of London," appeared, to which John Fothergill (1712–1780) contributed 26 papers including those on tic douloureux (1773), "The epidemic Disease of 1775" (influenza), and sick headache (migraine) (1778) from which he was a sufferer. These publications must be distinguished from the "Medical Facts and Observations" of which there are 7 volumes (1791–1797) in the library of the Royal Society of Medicine, edited by Dr. Samuel Foart Simmons (1750–1813) F. R. S. of Poland Street, London, who brought them out as a continuation of *The London Medical Journal*, the 11 volumes of which (1781–1791) he edited for a Society of Physicians. As in the case of the *Medical and Philosophical Commentaries* in Edinburgh edited by Andrew Duncan, Senior, for a Society of Physicians, and continued as the *Annals of Medicine* by Andrew Duncan and his son (vide p. 258), the Society of Physicians appears to have faded away. *The London Medical Journal* first came out monthly, then quarterly, and in his introduction to his "Medical Facts and Observations" Simmons says that the calls of the *Journal* becoming too much for his professional engagements he adopted a change of plan which would enable him to continue it at his leisure. A Society of (Licentiate) Physicians in the last third of the eighteenth century, composed of Licentiates of the Royal College of Physicians united by their feelings of dissatisfaction with the College, was supported by John Fothergill and William Hunter, but appears to have been mainly concerned with medical politics and the sins of the College. A medical society was started in 1779 in connection with the Anatomical School of John Sheldon and Andrew Blackall (to be distinguished from John Blackall (1771–1860) who wrote on dropsy and detected albuminuria before Bright's epoch-making work) in Great Queen Street, Lincoln's Inn Fields. His health failing, John Sheldon (1752–1808) left London in 1788 and his anatomical school was taken over by James Wilson. One of the rules of the Great Queen Street Medical Society was that, like a royal personage, "the President shall wear his hat while in the chair," a custom also obeyed in the early days of the present Medical Society of London, as shown by Samuel Medley's (1769–1857) portrait picture of its founders with James Sims (1741–1820), President for twenty-two years, from 1786 to 1809, in a cocked hat. The picture contains the portraits of 25 men prominent in the medical world at the time it was painted (1791), such as William Saunders (1743–1817) of Guy's who was the first President of the Medical and Chirurgical Society, the much beloved William Babington (1756–1833) the founder of the Geological Society in 1807 and its President in 1822, also one of the founders of the Hunterian Society and of the Medical and Chirurgical Society, and John Haighton (1755–1823) an anatomist, physiologist, obstetrician and mathematician, this distinguished trio hailing from Guy's Hospital. N. Branwhite's engraving of the picture was partially finished before Edward Jenner's portrait was added. The custom of the President wearing the cocked hat lasted till about 1832.

The present Medical Society of London was founded in 1773, mainly due to the energy of John Coakley Lettsom (1744–1815), a Quaker of Cheshire origin, a philanthropist, and a many-sided character. Born in Little Vandyke, one of the Virgin Islands, West Indies, he did not contest the soft impeachment that he had "the volatility of the Creole with the plodding industry of a German." Many stories are told of this great benefactor of the Medical Society; it has been said that not only was he one of male twins but that his mother had previously borne twin sons on six occasions, none except the last instalment surviving infancy (Owen[11]; St. Clair Thomson[12]). Seven is a mystical number, and if a seventh child is expected to see far, to be one of the seventh male twins should justify the anticipation of going even further. The Medical Society of London first met on May 19, 1773 and, working on Lettsom's "Hints for the Establishment of a Medical Society in London" (published June 23, 1773), at once began collecting a library at a house in Bolt Court, Fleet Street, which Lettsom left to the Society so long as the number of Fellows did not fall below 10. At first it was limited to 30 physicians, 30 surgeons, and 30 apothecaries, as general practitioners were then called. To Lettsom it is largely indebted not only for its inauguration and survival but for its splendid library, which in 1801 had 10,000 volumes and has recently been thoroughly explored and its wealth of valuable books put in order by the resident secretary, L. Haines Carter. In its early days of struggle Lettsom was most energetic and in 1789, when it numbered 250 members and brought out its first volume of *Transactions*, he was responsible one way or another for half of the articles in the volume. As a result of James Sims' unrivalled term of Presidency, discontent found its remedy in schism and the creation in 1805 of the Medical and Chirurgical Society, which was founded on May 22 at a meeting at the Freemasons' Tavern of leading medical men including Matthew Baillie, Alexander Marcet, John Yelloly, John Abernethy, Henry Cline, Edward Jenner, Everard Home, Gilbert Blane, and Astley Cooper. Four of the seceders, William Saunders (the first President of the Medical and Chirurgical Society), Maxwell Garthshore the obstetrician, Sir William Blizard who operated at the London Hospital when he was over eighty years of age, and Heaviside who had a museum of pathological specimens, were original fellows of the Medical Society. It was then agreed "That a Society comprehending several Branches of the Medical Profession be established in London for the purpose of conversations on professional subjects, for the reception of communications, and for the formation of a library." The new Society first had its local habitation at 2 Verulam Buildings, Gray's Inn, but moved in 1810 to larger premises at 3 Lincoln's Inn Fields where in 1834 it received a Charter of Incorporation from King William IV under the title of the Royal Medical and Chirurgical Society of London. In the following year it moved to 53 Berners Street, and remained there till 1889 when it migrated further west to 20 Hanover Square. Its amalgamation with 17 other medical societies to form the Royal Society of Medicine in 1907 has already been mentioned.

Sims continued undisturbed in the presidential chair of the Medical Society of London till 1809 when, perhaps as an antidote, J. C. Lettsom, who had been President as long before as 1775, was elected in his place. In 1850 the Society was in low water, the roll showing only 60 members. The remedy was successfully employed of amalgamating with the Westminster Medical Society which was founded in 1809, had in 1824 a membership of 1000, and after experiencing various oscillations had at the time of joining the Medical Society 275 members. In 1906, when the amalgamation of existing societies into the Royal Society of Medicine was being arranged, the Medical Society of London was approached, but stood aloof preferring to maintain its individuality and not to be absorbed by its offspring. It still excludes women doctors but has a roll of 627 Fellows.

Local medical societies in particular serve the much desired promotion of unity, peace, and concord among men living in the same district, who without this might be rivals without any other redeeming qualities. Otherwise, and increasingly with the passage of years, busy practitioners may become isolated and antagonistic to those who should be their colleagues and friendly members of a profession with great traditions.

Provincial medical societies were started in the last third of the eighteenth century; in 1770 Warrington seems to have set the example, and the library containing many seventeenth and eighteenth-century books and pamphlets, which Osler in 1906 obtained for the Johns Hopkins Medical School from the Warrington Dispensary, was probably the property of this Society. Other medical societies were established at Colchester in 1774, Plymouth in 1794, Leicester in 1800, Halifax and District in 1822, St. Helens in 1826, and Nottingham in 1828. The Gloucestershire Medical Society which, as it met in the parlour of the Fleece Inn, Rodborough, was spoken of as the Fleece Medical Society, deserves remembrance as on July 29, 1789 Edward Jenner "favoured the Society with remarks on a disease of the heart following acute rheumatism, illustrated by Dissections," one of the, if not the, earliest occasions on which rheumatic heart disease was recognized. Another notable paper read before this Society was C. H. Parry's "Inquiry into the Symptoms and Causes of the Syncope Anginosa, commonly called Angina Pectoris, illustrated by Dissections"; in this paper read in 1788, but not published until 1799, the conclusion that disease of the coronary arteries is the responsible factor was definitely stated.

Medical societies supply some of the essentials of post-graduate education, and these opportunities seriously followed may be very fertile, especially attendance on the larger and more specialized societies. This sphere of their usefulness was inimitably described by Osler[13] in an address in 1903 "On the Educational Value of the Medical Society."

In the stimulating atmosphere of debate, ideas for new lines of work and hypotheses demanding verification or condemnation, may be struck out like sparks from an anvil. Medical societies offer a legitimate means of intra-professional advertisement, and so enable young men, living, however, mainly on hope, to make themselves known to their older, better established, but not necessarily better equipped, brethren. In the early 'eighties three men, called "the three G's," Greenfield, Gowers, and Goodhart, were ever in evidence at the meetings of the various medical societies in London, and afterwards reached the highest places in pathology, neurology and general medicine, respectively.

When provided, as they should be, with a good library in order to be complete, medical societies constitute an advance on most medical clubs, whether educative or mainly social, as they thus give their members the means of listening to the conversation of their predecessors.

In order to prevent medical societies from becoming too engrossed in purely professional matters, dinners, conversaziones and popular meetings are commonly held so as to serve the purpose of clubs. At the Royal Society of Medicine this side was much developed by MacAlister by the creation of the Council Club, composed of any Fellow of the Society, who was or had been a member of the Council of any constituent section. The Club met at informal dinners, and from 1912 to 1924 gave opportunity for social acquaintance and for discussion of the Society's policy and activities. A further stage of this was the institution of social evenings attended by Fellows and their families to hear a short address of a popular character dealing with some facet of medicine.

Reference should be made to medical societies managed by those in *statu pupillari*, and first, as it is the only one with the following adjective, to the Royal Medical Society of Edinburgh founded in 1734 and honoured by the grant of a Royal Charter in 1778 through the exertions of the then President, Caleb Hillier Parry (1755–1822) afterwards "the distinguished old Bath physician" who gave the first account of exophthalmic goitre. As coming events cast their shadows before them, so does the presidency of this Medical Society in the Northern Athens frequently foretell eminence in after life; no one interested in medical history can have failed to have been struck by the frequency with which leaders of our profession have held this office. It began like a club in a meeting in a tavern of six students, George Cleghorn, William Cuming, Alexander Russell, Hamilton, Archibald Taylor, and James Kennedy. A year later the famous William Cullen (1710–1790), author of "First Lines of the Practice of Physic," and John Fothergill joined Cleghorn, the others having left the Northern Athens, and gradually the Society developed.

In Glasgow the first medical society was started by students in 1802 with the name "The Glasgow University Medico-Chirurgical Society." As Downie[13] pointed out, this example was followed in 1814 by "The Glasgow Medical and Surgical Society" originated by three physicians and three surgeons; at its second meeting its name was changed to "The Glasgow Medical Society," but in 1819, possibly as the result of surgical assertion, it resumed its original name. It is now the Royal Medico-Chirurgical Society of Glasgow. The Aberdeen Medical Society was founded in December 1789 in imitation of the Edinburgh Medical Society by twelve medical students, of whom James McGrigor (1771–1858) was secretary then and later was Director-General of the Army Medical Department for the extraordinarily long period 1815 to 1851. This Society was very soon joined by men in practice in the neighbourhood.

The Physical Society of Guy's Hospital, founded in 1771, lasted till 1850 having in 1830 given birth to the Pupils' Physical Society of Guy's Hospital, which will therefore be in a position to celebrate its centenary in 1930. Its first President was W. Saunders, who some thirty years later was the first President of the Medico-Chirurgical Society. Originally the students of St. Thomas's Hospital, then just across the street, attended the Physical Society's meetings, and since the European War there have been joint meetings of the Pupils' Physical Society and the Medical Society of St. Thomas's Hospital twice a year, thus recalling their former union. Among the famous men who have addressed the Society were Edward Jenner on vaccination in 1802, the discussion occupying four meetings, and Sir William Osler on Sir Thomas Browne on October 12, 1905.

The Middlesex Hospital Students' Medical Society in 1774 followed close on the heels of the Borough Hospital. The Medical and Philosophical Society of St. Bartholomew's Hospital founded in 1795 became the Abernethian Society in 1832 and flourishes mightily. At St. George's Hospital a Medical and Surgical Society for the students was started in 1832 and changed its name to the Hunterian Society in 1850, thus taking the same name as the Hunterian Society which has existed in the City since 1819.

Students' medical clubs may, as occurred in Scotland in the eighteenth century, be the first stage of a more formal society for practitioners and professors, or may give the hint which leads to establishment of medical societies. At the present day student clubs and societies are like the sands of the sea in number; America appears to be particularly rich in them; at Harvard, for example, there are more than a dozen such medical student clubs with names often made up of letters from the Greek alphabet, such as "The Alpha Omega Alpha," "The Lambda Phi Mu," "The Phi Beta Pi," and "The Phi Chi."

It is interesting to glance at the relation of Clubs, Societies and Universities in the advance of learning. In earlier times, and always to some extent, discoveries and advances in existing knowledge are largely individual in origin, though of course founded on the works of predecessors. The solitary worker will ever be an important factor; but with the increase of specialization inseparable from the progress of scientific knowledge, the need of collaboration for criticism and correction in cognate details has become more essential. Thus small groups of workers growing unconsciously into clubs are extremely useful as a means of obtaining mutual help and direction; incidentally too they must in some degree help to establish a claim for priority for at least the germ, if not the proof, of a new advance. A club may gradually become a society, or a society, such as the Physiological Society founded as such "for mutual benefit and protection[15]" in 1876, may have more of the character of a club than of a formal society. Private clubs offer opportunities for free expression and criticism which the more solemn and respectful meetings of a society, the proceedings of which are published, cannot supply. The value of societies, however, must not be underrated; in the seventeenth century, as Ornstein[16] has shown, scientific societies did much more in fostering experimental science than did the Universities, which were then ridden by conservatism, an attitude so entirely different from that now familiar that it is difficult to realize.

BOOKS AND LIBRARIES

Books are our familiar friends and therefore libraries, like clubs, provide welcome meeting places for making new acquaintances in many lines of thought and cementing old attachments; further, they make it easy to listen to our professional forbears. Thus the living can gain an intellectual and intimate affection for the heroes of the past. Friendship with those who have gone before has many advantages if we would only believe it and act thereon. It provides ready-made experience, an asset, however, which most of us prefer at whatever cost to acquire for ourselves; it makes us more modest by showing how much they did and knew under difficulties much greater than those of the present day, and further that much now applauded as "new" is in truth very old indeed. Libraries were aphoristically described by Ramón y Cajal as "successively the cradles and the graves of the human mind," and certainly to spend hours in one excites pity and humility, for there are numerous large and now forgotten volumes on which their authors expended their energies in the hope of attaining fame, a sobering warning to modern aspirants for literary honours that success in gaining immortal fame is unlikely to be attained without hard honest work and ability, and perhaps not even then.

As Walter Savage Landor, the author of "Imaginary Conversations," said more than a century ago, "There may be friends who have never seen each other." There are many examples of friends by correspondence; Clifford Allbutt and F. H. Garrison were such; Cushing[17] refers to a friendship of thirty years' duration between H. E. Handerson of Cleveland and Johann Hermann Bass, brought together by medical history, who never met in the flesh. This idea has of course been since elaborated. In "The New Lucian" H. D. Traill brought men of far distant centuries together to discuss their points of view: in one of these dialogues Tennyson is wonderfully complimentary to Virgil, and in another, more controversial in character it is true, Lucretius meets Charles Darwin and William Paley (1743–1805) whose "Evidences of Christianity" were, or should have been, well known to men of a former generation when going in for the Previous Examination at Cambridge. A book-lover knows well the attractions of his friends, the dead authors, to whom he can turn for counsel and comfort at any time of day or night, and can desert or even shut up at a moment's notice, without the necessity of argument, or any remorse or fear of giving offence, just as a broadcasting message can be cut off on the wireless. Ramón y Cajal advises us to "look on men with systematized minds as on books; they are read if interesting, but no one argues with them." There is too the advantage that such mental friendships cannot be disillusioned by too familiar contact with the frailties of poor human nature, which are not absent even from literary genius.

A man, and perhaps especially a professional man, can be judged by his books. "A library represents the mind of its collector, his fancies and foibles, his strength and weakness, his prejudices and preferences . . . The friendships of his life, the phases of his growth, the vagaries of his mind are all represented" (Osler[18]).

Librarians, who thus introduce the present to the past, should be the friends not only of those whose messages are under their official guardianship but of those who come to listen and to learn. MacAlister played both these parts. The perfect librarian is in truth a self-denying man who sacrifices his own ambitions to satisfy those of others in study and publication, for his duty, as described by that great exemplar of the profession, Henry Bradshaw (1831–1886) of Cambridge, is "to help others rather than to appear himself in print," and "to save the time of others." Apart from editorial work in the *Library*, *Medico-Chirurgical Transactions*, and the *Proceedings* and the *Bulletin* of the Royal Society of Medicine, MacAlister wrote little, thus contrasting with Gesner, Browne and Osler, and conforming to Bradshaw's dictum. Reference, however, should be made to his contribution to the volume dedicated to Osler on his seventieth birthday, in which under the heading "The Osler Library" he described the ideal library.

REFERENCES

1. DIBDIN, T. F. Bibliomania. 1811, p. 39.
2. GOSSE, E. Sir Thomas Browne, English Men of Letters. Macmillan, 1905.
3. CUSHING, H. Life of Sir W. Osler. Oxford Univ. Press, 2: 4, 1925.
4. PHILIP, R. *Brit. M. J.*, 2: 1029, 1926.
5. MACLAGAN, D. *Edinburgh M. J.*, 20: 577, 1875.
6. THIN, R. College Portraits, Being Biographical Sketches on Portraits in the Hall of the Royal College of Physicians of Edinburgh. Edinburgh, Privately Printed, 1927, p. 62.
7. Ed. 1, 1885, p. 33–4.
8. COLLINS, E. T. The History and Traditions of the Moorfields Eye Hospital. London, Lewis, 1929, p. 161.
9. FOX, R. H. John Fothergill and his Friends. Macmillan, 1919, p. 139.
10. BAILEY, J. B. *Brit. M. J.*, 2: 24, 100, 1895.
11. OWEN, E. Ann. Oration, *Tr. M. Soc. Lond.* 20: 321, 1897.
12. THOMSON, ST. C. *Tr. M. Soc. Lond.*, 41: 1, 1918. ANN. MED. HIST., N. S, 1: 1, 1929.
13. OSLER, W. Aequanimitas and Other Addresses. Ed. 2. Lond., Lewis, 1906, p. 345.
14. DOWNIE, W. The Medico-Chirurgical Society of Glasgow. 1814–1907, 1908.
15. VIDE: SHARPEY-SCHAFER, SIR E. History of the Physiological Society during its First Fifty Years (1876–1926). 1927, p. 7.
16. ORNSTEIN, M. The Rôle of Scientific Societies in the Seventeenth Century. Chicago Univ. Press, 1928.
17. CUSHING, H. Consecratio Medici. Bost., Little, 1928, p. 260.
18. OSLER, W. Bibliotheca Osleriana. Oxford Univ. Press, 1929, p., xxi.

ALPHONSE FRANCOIS MARIE GUÉRIN

By JAMES C. WILSON, M.D.

PHILADELPHIA, PA.

THE designation of the centuries by the letters B.C. and A.D. with the appropriate numbering rests upon a great fact of history and is convenient. Facts of far less importance but still of great historical significance sometimes fail of adjustment. To speak of the revolutionary advance of medicine in the nineteenth century and not mention Jenner whose work was done in the last quarter of the previous century and whose first book was published in 1798 would be a serious blunder. But to turn the leaf over, begin at that period and read on till the present is to duly regard ancient and established usage and the cohesion of the ascertained data of science. This century and a half constitutes an era, which in the nature of things is far from being completed. Earlier there were great leaders in medicine, Aesculapius, Hippocrates, Galen, Celsus, Harvey, epoch-making, centuries between them, others but no equal.

During the present historically brief period three names stand forth in imperishable fame as organizers of a new art for the prevention of disease, the restoration of health and the prolongation of life; Edward Jenner (1749–1823); Joseph Lister (1827–1912); Louis Pasteur (1822–1895). Of these the first was an accomplished gentleman, a keen observer, much interested from youth in biological subjects, a clinician, who after long opposition and delay was able to wipe variola from the face of civilization; the second, also a clinician, who banished hospital gangrene, thus marking the beginning of modern surgery; the third, no clinician but a master of research in plant and animal biology, who, using chemistry, the microscope and experimental methods rendered incalculable service in many ways to mankind. *Felix qui potuit rerum cognoscere causas.* These three working in harmony though apart, and in different fields, sowing the seed which is now yielding abundant and priceless fruit, have given to the world the medicine of today. The story of their lives and labors is an oft told tale which he who runs may read.

It must be noted here that artificial anaesthesia, a practice of apparently great antiquity,[1] but regarded even after chemistry had revealed the anaesthetic properties of nitrous oxide and the vapor of ether when inhaled merely as a scientific curiosity, attracted little attention until Long, 1842, Wells, 1844 and Morton, 1846 lead to the popularization of these and other anaesthetics and made the painless use of the knife an everyday event. Several names and much controversy becloud the history of this outstanding gift to operative surgery. (After this necessary digression I return to my theme.)

Alphonse Guérin whose name stands at the head of this communication has never beyond his own people and the borders of his own country received his due. Born in the little city of Ploërmel in Brittany in 1816, he received his early education at the Jesuit College at Vannes and afterward entered upon the study of medicine at Paris. His thesis for the Doctorate in 1847 entitled "De la fiévre purulente" showed that he had already an intuition of the discovery that was to place him among the great benefactors of humanity. It was, however, unsuccessful, because as he wrote in later life the masters of that epoch seemed to care very little for an opinion which was in complete disaccord with those that they had long held. The same year he published a brochure of 72 pages on the "Influence of Pressure in the Development and Treatment of Surgical Maladies." From that time he was busy teaching surgery and writing. "Maladies des organs genitaux externes de la femme;" "Éléments de chirurgie operatoire, ou traité practique des opérationes;"[1] "Leçons cliniques sur les maladies des organes genitaux internes de la femme," all following in a succession which only intense interest in his work and masterful energy enabled the author to achieve.

---

[1] Encyclopaedia Britannica. Ed. 13. Anaesthesia.

Appointed to the Hôpital Lourcine in 1858 he devoted four years to the diseases peculiar to women. This work was continued clinically in the Hôpital Cochin and attracted widespread professional attention by its novelty and its judicious management. Transferred from the Hôpital Cochin to the Hôpital Saint-Louis in 1863, he continued his clinical teaching, which was in detail followed in a further volume.

The war of 1870 found Alphonse Guérin devoted to his post. In fact he had a double service at Saint-Louis and Saint-Martin during the entire siege. In this trying period however he had constantly in mind the thoughts which impelled him to choose for his thesis purulent fever and shortly afterwards to publish the brochure on the influence of pressure on the development and treatment of surgical maladies. The opportunities to test his plan of treatment greatly increased. Warfare having ceased, Alphonse Guérin gave up his connection with the hospital Saint-Martin and devoted himself wholly to the service of the hospital Saint-Louis. The insurrection of the Commune broke out at this time and again placed at his disposal numbers of wounded men on whom he applied his treatment.

The wards of this hospital had long borne an extremely unfavorable reputation; but under his management the number of recoveries of wounded men both operated and not operated increased so rapidly and greatly that surprise and admiration were generally aroused. In fact it was thought by competent observers that the method of Alphonse Guérin marked the beginning in France of a new era in the art of surgery.

M. Orieulx de la Porte in his very readable "Alphonse Guérin Sa Viè—Ses Oeuvres," quotes Dr. Paul Reclus:

> The terrible year is ended; the wounded have died like flies in the Paris hospitals. The most eminent masters of surgery appalled, have doubted their art. Trélat fled the hospital Saint-Louis after having lost there all his wounded; Gosselin, Verneuil and Nelaton closed their wards. Broca laid down his bistoury. Nelaton was hopeless at having lost seventy patients after seventy operations in a service installed in the Grand-Hôtel with every possible comfort. Nelaton declared that he who should find the means of preventing the purulent infection, the cause of such frightful mortality, would deserve a statue of gold. At this very

---

[1] Ed. 4, 1870; Ed. 6, 1881.

---

hour so
before
hospita
indescri
Alphons
Louis I
in thirt
cure ar
those
escaped
operatio
erect, g
while i
recovere
regular
apparat
It wa
aurora
the ant

Hon
minatio
orality
medal
patriot
of whic
gratitu
of the
Cheval
Alph
to eve
the sar
and pr
at the
Societi
bore th
His
was fi
his rej
as he
intuitio
in the
present
tion lo
cal wor
but th
of it t
acciden
by wh

hour so disastrous that its like had never before appeared there ran through the hospitals a rumor which caused an indescribable astonishment. The surgeon Alphonse Guérin in his service at Saint-Louis had obtained nineteen recoveries in thirty-four operations! He claimed to cure amputations of the thigh (and all those who were dressed by himself escaped death). Three days after the operation one saw the patients standing erect, getting about on their crutches, while in the other services, those who recovered—scant minority—remained the regular forty days stretched in their apparatus. And this was true. . . .

It was the Revolution in surgery, the aurora of a triumphant era, the dawn of the antiseptic method in France.

Honors were conferred; at the termination of the Commune, the Mayorality of the XII^e Arrondissement, a medal designed to commemorate the patriotic devotion of Alphonse Guérin, of which he had made proof, and the gratitude of his fellow citizens; Officer of the Legion of Honor, having been Chevalier since 1864.

Alphonse Guérin gave importance to every position that he held; at the same time he dwelt upon theory and practice and his communications at the Academy and other learned Societies were always remarkable and bore the imprint of authority.

His peculiar method of treatment was first suggested at the time of his rejected thesis. It came to him, as he repeatedly stated later, by intuition and was gradually developed in the course of years as opportunity presented itself. Already his imagination looked for a cause. All the surgical world talked of purulent infection but the world scarcely knew more of it than the name. Following an accidental wound or an operation by which the flesh was bared, microbes powerless to penetrate the unbroken skin or mucous membrane found their way into the lacerated part, multiplying with prodigious and terrible rapidity, disorganizing the tissues, poisoning the blood and fluids of the body and producing the frightful specific disorders known under such names as gangrene, purulent infection, pyemia, septicemia and erysipelas, which destroyed life after horrible suffering. This scourge defies every effort, yields to no experimental cure of surgery or medicine, sweeps all before it. From 1847 Alphonse Guérin dared to contend with an enemy which seemed invincible. He brought to the service of surgery gifts which at an earlier period of his life he had desired to use in the practice of law. The decision of his character, his determined will, his combativeness influenced him in the choice of a subject so difficult. The success which crowned his lifelong effort proved the soundness of his judgment. The purulent fever was due to infectious miasms in the atmosphere. This was the burden of his rejected thesis. It follows directly that the only way to escape the horrible scourge of the hospitals was to prevent the access of the contaminated air to the wound.

The thesis of 1847 concludes with the statement that the prophylactic observation therein announced gave to the writer abundant promise of good results if it should have proper recognition. But this recognition was long delayed. Alphonse Guérin never ceased to call the attention of his pupils to that important question; he discussed the doctrine with visiting physicians; he inspired his residents with it as a subject for their theses; but it was in complete disaccord with the reigning doctrines and with the prevailing practice of dressing wounds. In a discussion in the Academy of Medicine in 1869 upon the nature of the purulent infection he alone defended the theory of the miasmatic poisoning of the blood and was opposed by all his colleagues in the Section on Surgery.

MONUMENT OF DR. GUÉRIN AT PLOËRMEL.

Alphonse Guérin was a clinician, not a master of research. To him that which appeared a sufficient cause was enough. The myriads of moving particles revealed in the air by a ray of light in an otherwise darkened room were miasmatic. Beyond this he had neither the knowledge nor an urgent desire to ascertain their nature. How were they to be kept out of wounds? Pasteur in his work upon beer had filtered air successfully by using wadding. Why not use wadding to filter the air of the wards? Just what this wadding was and how to be prepared is not set forth. Was it carded cotton or wool used to line or stuff articles of dress or the surface of spongy web of carded material covered with tissue paper or a coat of sizing? Was it wool for the housewife's spindle, or wool, flax or hemp disentangled in its fibers, cleansed from extraneous matter, the coarse parts separated, making the material fine or soft for spinning? It is not known. Cleanliness and some degree of heat doubtless entered into its preparation. Cleanliness or the filter was useless. It is however the first word in personal hygiene. Someone has said, speaking of the decline of the plague in Western Europe (fewer outbreaks and decreasing mortality) "When the shirt came in the plague went out." Heat is the foe of microbes; fire, its high degree, purifies everything. London, plague-stricken for centuries, has been plague-free since the great fire of 1666.

The influence of pressure in the development and treatment of surgical maladies had been considered in an early contribution to the literature.

Alphonse Guérin was thus fully prepared for his work. The wadding treatment, *pansement ouaté*, consisted in the combination of the filtering of the air, firm but elastic pressure, a constant temperature and infrequent dressing. These were its essential factors. They were instituted as soon as possible after the wound, on the operating table, on the field of battle. After cleansing the part to be enveloped with a weak carbolic acid solution, the wadding was applied to the wound and surrounding parts in layers with firm pressure. Turns of bandage were then made by which the tissues were pressed together, anfractuosites and depressions effaced and spaces in which blood and serum collected, obliterated. When, at the end of three weeks, more or less, the bandages were removed, cicatrization had taken place.

The infrequency of the dressings caused much uneasiness on the part of the surgeons. If the wadding dressing is applied properly there is no cause for alarm. Not only are cures frequent but there is also remarkable absence of pain from the beginning.

Alphonse Guérin ceased from his labors February 21, 1895.

A search of medical biographical literature yields scant mention of his life and works. In French the duodecimo of 174 pages of M. Orieulx de la Porte from which I have drawn freely is the most satisfactory. There are many letters, very interesting sidelights upon the siege of Paris and the Commune. In English the Index Catalogue of the Library of the Surgeon General's Office names him, giving a short list of his writings. "Pasteur, the History of a Mind," by Emil Duclaux,[3] mentions on page 191: Alphonse Guérin, Member of the Academy of Medicine and Commander of the Legion of Honor. "Lister As I Knew Him,"[4] contains not a word about Guérin.

This little sketch is a slight contribution to the memory of a physician who has been strangely overlooked, when he should have been remembered but who was highly appreciated and honored in the place of his birth. In the town of Ploërmel on September 13, 1896, there was unveiled with touching memorial services a beautiful statue to his memory bearing upon two sides of its plinth the following inscriptions:

ALPHONSE GUÉRIN
APPLIQUE LE PANSEMENT OUATÉ
A L'HOPITAL SAINT-LOUIS EN MAI 1871
JUSQU'ALORS LES BLESSÉS ET LES OPÉRÉS
DU SIÈGE DE PARIS ET DE LA COMMUNE
AVAIENT SUCCOMBÉ A L'INFECTION
PURULENTE
AUSSITOT TOUT CHANGE D'ASPECT
ET LE TERRIBLE FLÉAU
EST VICTORIEUSEMENT COMBATTU
GRACE A
CETTE DÉCOUVERTE GÉNIALE
DÈS 1847, ALPHONSE GUÉRIN
SONGEAIT A COMBATTRE LE FLÈAU QUI
DÉCIMA
LONGTEMPS LES BLESSÉS ET LES OPÉRÉS
DANS SA THÈSE INAUGURALE IL
ATTRIBUAIT
L'INFECTION PURULENTE A LA
CONTAMINATION
DES PLAIES PAR LES MIASMES CONTENUS
DANS L'AIR IMPUR DES SALLES D'HOPITAL
CETTE IDÈE LE CONDUISIT A LA
DÉCOUVERTE
DU PANSEMENT OUATE ET ASSURE A SON
NOM
UNE PLACE GLORIEUSE DANS L'HISTOIRE
DE L'ANTISEPSIE CHIRURGICALE
SES COLLÈGUES, SES COMPATRIOTES ET
SES AMIS.

"La mort est l' avènement du vrai" (Victor Hugo).

---

[3] Trans. by Erwin F. Smith and Florence Hedges, Phila., Saunders, 1920.

[4] Leeson. "Lister as I Knew Him." 1927.

MEDICINE IN CHINA, OLD AND NEW*

By EDWARD H. HUME, M.D.

NEW YORK

I. Introduction

THE great French Orientalist, Cordier, said in his "General History of China," published nine years ago:

> The Occidentals have singularly contracted the field of history of the world when they have grouped around the people of Israel, Greece, and Rome the little that they knew of the expansion of the human race, being completely ignorant of those voyagers who plowed the China Sea and the Indian Ocean, of those cavalcades across the immensities of Central Asia up to the Persian Gulf. The greatest part of the universe, and at the same time a civilization different, but certainly as developed as that of the ancient Greeks and Romans, remained unknown to those who wrote the history of their little world while they believed that they were setting forth the history of the world as a whole.

The unconsciousness that there was a vast area of the universe east of the Euphrates River is a conspicuous fact in the attitude of our ancestors. Concerning the great deluge in the time of Noah, we now know that it laid waste a large area in Mesopotamia, as described so vividly in the Old Testament; but we also know that it was by no means a universal flood. From the narrow outlook of our forbears we are just beginning to break loose. We are just at the threshold of a new era in which it is to be our quest to find our real debt to the older civilizations in the center and east of Asia.

The Chinese always thought of themselves as at the center of the universe. Their country they called "The Middle Kingdom." All outside were barbarians. The great Chinese scholar of the eighth and ninth centuries of the Christian era, Han Yu, probably the most respected of all Chinese literary and historical critics, protested in a memorial to the Emperor against the honors being paid to a Buddhist relic. He said "Buddha was a barbarian. His language was not the language of China. His clothes were of an alien cut. He did not utter the maxims of our ancient rulers, nor conform to the customs which they have handed down." Such pride in one's own national heritage, coupled with contempt for other and less understood cultures, while a universal trait, is perhaps excusable in the Chinese people, who have had so rich and so continuous a historical development.

II. The Evolution of Medicine in China

It is commonly believed that Chinese medicine began to take formal shape at least twenty-seven hundred years before Christ. As in every other early civilization, religion and astrology, superstition and witchcraft, were curiously merged with the profession of healing. Priests and sorcerers dominated it. This is well illustrated in the Chinese ideograph for medicine which consists of a quiver and a spear surmounting a symbol representing a witch and a wizard. With the passage of time, the witch symbol was replaced by the symbol for a jar of wine, indicating the introduction of alcoholic decoctions into the pharmacopoeia. It is entirely probable that a study of other Chinese characters will throw further light on the evolution of the indigenous system of medicine.

---

* Read at the Section of Historical & Cultural Medicine, N. Y. Academy of Medicine, May 8, 1929.

Conscious of this admixture of witchcraft and sorcery with the art of healing, the thoughtful in China have never been willing to commit their relatives to the care of those who were likely to be untrained and superstitious. Thus it arose that the family became, and still remains, the final arbiter as to the appropriateness of the diagnosis and treatment indicated by the physician. For many centuries, the intellectuals of China have read the really classical medical works as they have read classical literature, history, philosophy and poetry. They have been better informed as to the classical medical authorities than the average physician whom they might summon. I have often been subjected to such questioning by the family court as would astonish and repel the average American physician. After examining a patient and giving my verdict, with an outline of the procedure proposed, I have seen the family court sit in conference to decide whether or not to accept the suggestions offered. More than this, following the custom of centuries, I have seen the family send for one consultant after another, finally deciding for itself between the diagnoses suggested and the treatment outlined. No family in old China ever put the patient under the care of a single physician, but always reserved to itself the final decision as to action in the patient's behalf.

The development of Chinese medicine has been sketched for us with great illumination by Dr. C. M. Wang of Hangchow. He divides its history into four periods, and for convenience I shall follow his outline.

1. THE ANCIENT PERIOD (down to 1000 B.C.): Much that is said of this era is legendary, as we have no dependable records. Three names, however, are held in the highest regard. The ancient period may be said to have begun with the Emperor Shen Nung who reigned about 2737 B.C. He is universally known as the originator of the Chinese materia medica. Every one knows that "Shen Nung daily tasted a hundred herbs." Naturally, he is called "the father of medicine." Following him reigned Hwang Ti who, in association with one of his ministers, is said to have written the famous "Classic of Internal Medicine." Upon this classic is built up most of the medical literature of China and it still stands as the universally accepted medical authority throughout the land. A French translation has been made by Dabry. The third member of that early distinguished trio was I Yin, an able prime minister who lived about 1800 B.C., and who is credited with being the originator of medicinal decoctions.

2. THE CLASSICAL PERIOD (1000 B.C. to about 1000 A.D.): During this era, literature and art, philosophy and government, religion and medicine, reached a very high degree of development. Confucius and Mencius, Laotze and Moti, lived at this time. Unfortunately, philosophic reflection and subtle debate characterized the period rather than experimental progress. In this period there arose, also, the two doctrines which form the basis of Chinese medicine. The first is the doctrine of the two primary

principles, Yang and Yin. From these two principles everything in nature is supposed to arise. They represent, in antithesis, the male and the female element, heaven and earth, day and night, heat and cold, life and death, the sun and the moon, strength and weakness, positive and negative, and other contrasting forces. We still know far too little of that dim distance when, in widely separated areas of Asia, philosophic reflection gave rise to so many related ideas.

The second doctrine is that of the five elements in nature, namely, metal, wood, water, fire and earth. The human body is described as made up of these elements in harmonious proportions, health remaining while the proportions are normally adjusted, and disease following if the balance is disturbed. Corresponding with these five elements are the five major organs: spleen, liver, heart, lungs and kidneys. These elements and organs are related, furthermore, in a complex scheme, to the five planets, the five colors, the five tastes, the five climates, etc.

During the earlier part of this classical era, probably about 250 B.C., there lived a famous practitioner, Pien Chiao. He is said to have been the first to use narcotic drugs, administering them in wine. This made it possible for him to undertake certain surgical operations. No higher honor can be paid a physician in China today than to call him a living Pien Chiao.

During this period, lasting about two thousand years, certain medical procedures came into common use, the two most important being massage and acupuncture. While massage was practiced in China from the earliest days, it was not till about 600 A.D. that it gained recognition as a definite department of medical science. A special chair, under a special professor, was then established in the imperial medical school. The publications of the Jesuit Fathers brought it to the attention of Europe towards the close of the sixteenth century. No one who has lived in a Chinese city will fail to recognize the familiar sound of the gong struck by the blind masseur who roams the streets at night, hoping to be called in to administer the treatment in which he is so adept. Acupuncture is also an ancient Chinese practice. It extended early to Japan, was brought from there to Europe by a Dutch surgeon at the end of the seventeenth century and was particularly valued in France during the early part of the nineteenth century. There is a copper model of the human body in the Imperial Academy of Medicine in Peking, pierced with 367 holes at the points where acupuncture may be performed. Paper is pasted over the figure and the student of acupuncture is required to practice needling so as to acquire accuracy in striking the spots where treatment may be safely given. In nearly every provincial capital as well as in some smaller towns, less formal models of the body are to be found, some pierced with arrows at the points where acupuncture is safe.

Those who have tried to secure cadavers for anatomical teaching in China realize how reverence for the dead has made human dissection practically impossible. Only recently has opposition to anatomical study weakened. It is reported, however, that early in the Christian era certain criminals were killed and dissected, measurements of the internal organs made, and bamboo sticks inserted into the blood vessels to trace their course. Certainly the circulation of the blood was distinctly foreshadowed at least two thousand years before the time of William Harvey. Consider the following passage from the Classic of Internal Medicine:

> All the blood is under the jurisdiction of the heart. The twelve blood vessels are deeply hidden between the muscles and cannot be seen. Only those on the outer ankles are visible because there is nothing to cover them in these places. All other blood vessels that are on the surface of the body are veins. The harmful effects of wind and rain enter the system first through the skin, being then conveyed to the capillaries. When these are full, the blood goes to the veins and these in turn empty into the big vessels. The blood current flows continuously in a circle and never stops.

Whatever the achievements of Chinese medicine prior to the second century B.C., its real progress began with the Han dynasty. Dr. Wang well says that its scientific advancement centers in the three figures:

(a) Tsang Kung who lived about 170 B.C. and left a reputation for his detailed clinical case records, 25 of which have been preserved, 10 of them the records of fatal cases.

(b) Chang Chung-king who lived about 195 A.D. His eminence as a physician was widely recognized and he even held office for a time as mayor of the city of Changsha. Chang's work on typhoid fever is one of China's great medical classics. The descriptions of the malady are clear, although other diseases than typhoid are evidently included in some of the clinical observations. In this treatise it is noteworthy that only a few potent drugs are recommended, to be used singly, instead of the shotgun prescriptions favored by the ordinary physicians of the day. Chang recommended, also, that typhoid fever be treated by cool baths as an antipyretic measure, thus antedating James Currie by some seventeen hundred years. He recommended the use of enemas rather than cathartics. Chang was the first of a series of clinicians who gave attention to physical signs and symptoms and who carefully recorded the actual results following the administration of drugs. He was not only a keen observer of disease, but an upholder of the dignity and responsibility of the medical profession. No one else in medical history could fairly be said to deserve the title of the Hippocrates of China.

(c) Hua To, however, was the most famous surgeon in China's history. It is reported that with the use of narcotic potions he was able to perform many operations, ranging from venesection to laparotomy. He is said to have excised the spleen and to have done resections of the intestines and liver.

Aside from the contributions of these three distinguished men, physical diagnosis became established at this time, and included four methods; observation, attentive listening, interrogation and palpation. The Chinese physician certainly observes with severe scrutiny and can detect many of the signs of disease with singular accuracy. He seldom undresses the patient, so that his observations center about congestion, pallor, tumescence and pulsation in the head and hands. His auscultation is neither aided by instruments nor performed with the ear against the body. It consists in attentive listening to the patient's groans, grunts, sighs and ejaculations to which custom has given individuality, so that each has a definite meaning. Interrogation is formal and tends to elicit answers in line with China's traditional medical philosophy, rather than to provide objective information. Of the four methods, the palpation of the pulse is the most studied and most highly regarded diagnostic procedure in China. Quantities of treatises have been written on the pulse, describing the information to be gained from the several points to be palpated on the left wrist and on the right wrist. It is remarkable to watch a Chinese physician feeling the pulse and to observe the keenness with which he interprets his findings. The procedure is a literary ritual, undertaken deliberately and reflectively.

I remember seeing a Chinese physician feel the pulse of a Western professor. After careful palpation, he said without hesitation that the patient was thoroughly healthy except for his lungs which appeared to be seriously below par. Singularly enough, the patient had had pleurisy with effusion only a year or two earlier! I have repeatedly seen a Chinese physician feel the pulse of a patient and report unhesitatingly that he was suffering from nephritis. Laboratory examinations confirmed the diagnosis!

Still further features introduced during this classical period were the catheter, formed of the hollow leaves of allium fistulosum; vaccination; and organotherapy. Vaccination is described as having been introduced by Prime Minister Wang about 1000 A.D. He inoculated his son with the scab from a patient who had smallpox. He learned the method from a priest who came from O-mei Shan, the sacred mountain of Western China. Other methods used were to take the wet serum directly from pustules, to use a moistened scab or powdered dry scabs and to wear the garment of an infected person. A long article appears in a medical classic of this period discussing minutely the choice of scabs and the determination of persons suitable to receive inoculation. Methods of inoculation were four, by the needle, by blowing the powdered scab into the nostril, by inserting a wet scab into the nostril and by wearing an infected garment.

3. THE CONTROVERSIAL PERIOD (11th and 17th centuries A.D.): During this epoch there appeared a great number and variety of monographs on particular diseases. This was particularly true during the Sung dynasty which lasted three centuries and came to an end about 1280 A.D. Among the original works we find monographs on the following: on Beri-Beri; on the Care of the Aged, an early treatise on the care and feeding of old people; on Women's Diseases, a textbook in 24 volumes; on Obstetrics, the earliest monograph on this subject in China; on Pathology, a textbook in 18 volumes entitled "Three Courses of Diseases"; on The Fontanelle, an anonymous work in 2 volumes; on Carbuncle, together with a nine-volume publication entitled "Royal Infirmary Model Essays," which is in fact a collection of examination papers. In addition to these monographs, an Imperial Cyclopedia of Medicine was published during the Sung dynasty, compiled under orders of the Emperor by a staff of medical men. The work was published in 200 volumes, most of which have unfortunately been lost.

In addition to the inoculation against smallpox, mentioned above, which was discovered in 1022 A.D., two other features of the Sung dynasty are worthy of note, namely, the establishment of medical schools and the holding of state medical examinations, both of which began in 1068 A.D., under the Emperor Shen Tsung. It is interesting to reflect that at a period only two years after William the Norman landed in England, when that country was still a long way from the organizing of its formal education, China had made such progress in medical education and examination.

During the Ming dynasty (1368–1644 A.D.), the "Synopsis of Ancient Herbals" was published. This important work was compiled by a district magistrate in Central China, and consists of 52 books.

> All known works on materia medica, to the number of 41 were consulted, while references to 360 treatises and 591 other scientific and historical works were freely made. There are 71,096 formulae given in this work and the substances enumerated include 1892 kinds. These are arranged in sixty-great classes under sixteen orders. This treatise is one of the most popular and important books in Chinese medical literature and merits the praise accorded to it by doctors as well as laymen.

Published in 1590, no medical reference book in the western world begins to wield such influence in its field as this work on materia medica does in China. It is more than probable that pharmacological studies, based on suggestions from this and similar Chinese works, will enrich the world's knowledge of potent pharmacals. We find reference in this work, for example, to a plant called Ma-huang, or *ephedra vulgaris*, that grows wild on the hills of North China. The recently extracted alkaloid *ephedrine* occurs in this Chinese plant, which had a place in the pharmacopoeia of that land centuries ago.

Another feature of the Ming dynasty was the appearance of syphilis in China, the source of which has caused much controversy, reminding one of the argument in southern Europe as to whether syphilis came there through French or Italian armies. Most Chinese writers maintain that it was unheard of in China until the middle of the sixteenth century and that it was introduced into Canton by Portuguese from India. "The descriptions of this disease were very accurate and illuminating and in one interesting monograph, written in 1631, the various manifestations and hereditary transmission of syphilis are mentioned in full detail."

4. THE MODERN PERIOD: The last of the Chinese imperial dynasties, the Manchu, came into power in 1644. By this time, Westerners were already in the land, the Portuguese having reached Canton in 1516, the Spaniards and Dutch a little later and the English in 1622. Undoubtedly many of the foreign commercial groups brought ship's physicians with them; while the Jesuits, who first appeared in Peking in 1581, had not a few scientists in their number, men familiar with aspects of botany and chemistry, as well as with mathematics and astronomy. Some of them received high honor at the court of K'ang Hsi, who came to the throne in 1662 and reigned for sixty years. Falling seriously ill with malaria in 1698, he sent for his Jesuit friends, who were reputed to have secured a potent bark from Peru, one that was said to be of great value in cases of

ague. Much against the wishes of the court officials, the Emperor insisted on taking the bark under the guidance of a Jesuit father. He was completely cured and presented to the religious order a splendid site in the capital, where one of their largest cathedrals now stands. More than this, the Emperor was a patron of the arts throughout his reign, many medical publications being issued with his approval. These were, however, compilations for the most part, rather than original works.

The eighteenth century was one of comparative isolation against the West, but by 1805 an English physician, Dr. Hobson, is reported to have visited Canton, although Dr. Thomas R. Colledge, a physician of the East India Company, was undoubtedly the first to establish a clinic there.

In May 1806 the modern method of vaccination was introduced into China via the Philippines and Macao. It is noteworthy "that a century before Jenner's epoch-making discovery, the Chinese seem to have had an idea of vaccination, for in the Synopsis of Ancient Herbals the use of cow fleas is described as a method of preventing smallpox." It was believed that the fleas of a cow suffering with vaccinia might be used to immunize a human individual. This treatment is said to have become very popular.

By 1844 the first Chinese student, C. H. Wong, was ready to go abroad for the study of Western medicine, travelling to the United States with his schoolmaster, the Rev. Samuel R. Brown. After studying here for four years, he went to Edinburgh and received his medical degree there in 1855. Two years later he returned to China and worked assiduously in hospitals in South China until his death in 1878.

The first Western physician to settle in Canton and to launch a permanent hospital work was Dr. Peter Parker, a graduate of Yale, who reached China about 1835 and is known as the man that "opened China at the point of the lancet." He was the first of a long line of medical missionaries, men with the pioneer spirit that would not be discouraged by the difficulties and obstacles they constantly encountered. The establishment of modern medicine in China is due, in large part, to their ceaseless activity in starting hospitals and dispensaries and in breaking down the almost universal suspicion that met them wherever they went. The old Chinese systems of medicine have been so deeply intrenched in the popular confidence, that the countless innovations proposed by the foreigner aroused fear and hostility that cost not a few medical lives. Surgery was undoubtedly the most dramatic aid the Western doctor used in getting established; and even today the average Chinese citizen, intellectual or illiterate, will tell you that he has great admiration for the surgical procedures of the foreign doctor, but that when it comes to internal medicine, he believes the Chinese doctor the better able to understand and treat his malady.

With the opening of the twentieth century, great strides began to be made by modern medicine. For one thing, Japan, which had already made German medicine its state model, began to graduate in its Grade B medical schools, numbers of alert young Chinese. Returning to their own country, this Japan-trained group acquired political influence and exerted it, frequently in opposition to the Western-trained physicians, whether Chinese or Westerners. It will take half a century to reconcile the conflicting interests represented in such a situation, for the early group that received its medical training in Japan, was unprepared in basic science, studied superficially while there, and returned with little or no clinical experience after graduation. Even today there are two national medical associations, one founded by those trained in Japan, and the other by those trained either in Europe and America, or under Western doctors who taught them in China.

III. THE CHINESE PHARMACOPOEIA

Berthold Laufer of Chicago has placed us under a great debt by his studies of Chinese medicine and particularly by his monograph entitled "Sino-Iranica," in which he describes the exchanges between ancient Iran and China, of material products such as silk, bamboo, etc., as well as pharmacopoeial articles. The Emperor Wu (140 to 87 B.C.), for instance, greatly desired to possess the fine thoroughbred horses of Iran and sent General Chang Kien on a memorable expedition to Fergana in 126 B.C. to get them. Returning with the splendid animals, which were believed to have been the offspring of a heavenly breed, General Chang, who was a practical man, concluded "that if these much coveted horses were to continue to thrive on Chinese soil, their staple food, alfalfa, had to go along with them." He therefore took from Iran to China the seeds of alfalfa, planted these on wide tracts of land near the imperial palaces and thus introduced an important botanical specimen into the ancient empire. Alfalfa proved to be not only food for horses but was used in a number of ways in the Chinese pharmacopoeia. From the capital it spread all over the north of China and in recent years has been carried to Russia. Singularly enough, the Chinese word for alfalfa is *mu-su*, taken directly from the Iranic word, probably *muk-suk*. General Chang also brought the grape to China in 128 B.C.

Through the centuries other exchanges have occurred. We know that the peach and apricot originated in China and were carried thence to the West and South. Camphor and cinnamon, cassia and rhubarb, were drugs highly prized in China and regarded in other countries as of better quality if they came from China. In 1562 Garcia da Orta said that the best rhubarb in Persia came from China.

In the Chinese pharmacopoeia we find many others of our familiar medicaments, such as saltpetre and sarsaparilla, calomel and red oxide of mercury. The latter was sent as a tribute to the imperial house each year from a district in the west of Hunan province, where an abundant supply has always been available.

Other drugs that have been prominent in the Chinese pharmacopoeia are asafoetida, which is used for chorea, for syphilis and as a vermifuge; galls, which are used both in ointment form and internally; mustard; castor oil; balsam; nux vomica and many aromatics.

Tea has had many uses in the pharmacopoeia. The pomegranate is an illustration of the way in which ancient China mixed objective facts and symbolism. It is said to have been brought to China from ancient

Iran and found its way into the Chinese pharmacopoeia. More than this, however, because of its exuberant seeds, it is regarded as an emblem alluding to numerous progeny. It has become a symbol opposed to race-suicide. Two pomegranates were presented to King Ngan-teh when he was being married. It was explained that the pomegranate enclosed many seeds and implied the wish for many sons and grandsons. The fruit is still a favorite marriage gift.

IV. MODERN MEDICINE IN CHINA TODAY

The noteworthy facts regarding modern medicine in China today are that medical education is well launched, that there is already at work a goodly number of trained physicians, quite an army of nurses and a few public health workers, already leavening the social order.

Through the past decades, every Western physician who conducted hospital work in China gave informal training to such men as he could gather about him. It was these medical missionaries who laid the foundation of modern medical education in China. Gradually, formal teaching was introduced.

By 1915 several modern schools were under way. The Chinese group included a National Medical School in Peking, a provincial school in Soochow, one in Hangchow, one in Canton and certain others. The medical missionary schools included the Peking Union College formed by a federation of medical missionary teaching units; the St. Johns Medical School in Shanghai; the Medical School of Shantung Christian University in Tsinan; the Medical School of Nanking University; and the West China Medical School in Chengtu. Two cooperative schools were also under way, including the Hunan-Yale Medical College in Changsha, and the Kung-Yee Medical School in Canton.

Soon after 1915 the institution in Peking was taken over by the Rockefeller Foundation which built a magnificent medical school and hospital plant in the national capital, preserving the old name of Peking Union Medical College. Formally opened on September 15, 1921, this institution represents the highest ideals of medical education and practice and serves as a center where Chinese students may go to receive the best possible training for the profession and where physicians of any nationality, practicing in China, may go from time to time to renew their strength.

The day of western leadership in medicine in China has well-nigh passed by. Westerners are needed, however, to cooperate with the Chinese in clinical work, in medical teaching, in research, in nursing education and in public health work. The field of opportunity is boundless. China offers a tremendously attractive opportunity for men and women of science who desire to search, to practice, and to prevent, in the field of medicine.

DOCTOR GEORGE FORDYCE AND HIS TIMES*

By W. B. HOWELL, M.D.

MONTREAL, CANADA

IN the eighteenth century there was, in Paternoster Row, under the shadow of St. Paul's Cathedral, an old tavern which was known as Dolly's Chop House. Here, punctually every afternoon at four o'clock, during many years of the latter part of the century, there used to arrive a Scotch gentleman of somewhat unprepossessing appearance. His clothes were slovenly. The expression of his face, with its fat cheeks and long thick upper lip was dull. His arrival was the signal for the cook to commence broiling a pound and a half of rump steak, and for the waiter to fetch a large silver tankard of strong ale, a bottle of port and a quarter of a pint of brandy. When he had taken his accustomed seat a plate of fish or half a broiled chicken was set before him. The object of this preliminary course was to take the edge off his appetite while he waited for his steak, a precaution of some importance, for he took only one meal a day. He drank half his allowance of brandy before beginning the steak, the ale while he was eating it, and the rest of the brandy immediately afterwards. Last of all he drank his port. After his dinner this creature of habit used to cross the street and enter the Chapter Coffee House, there to sip brandy and water and listen to the conversation of the mixed company of book sellers, literary men and physicians who formed the regular clientele. An hour or two later he would go forth to attend a meeting of some scientific or literary society or, if he had no engagement, return home, looking in on the way for some more brandy and water at the London Coffee House in Ludgate Hill, and then, if he felt that he had not had enough to drink, at the Oxford. The gentleman was Dr. George Fordyce, one of the two medical practitioners who were members of the Literary Club. The other was Dr. Warren who attended Johnson on his death-bed. Neither of them seems to have aroused Boswell's interest, for he mentions them rarely, and then only in the most cursory way. However, in a company of less than twenty, which included Johnson, Reynolds, Garrick, Adam Smith, Charles James Fox, Burke, Sheridan and Gibbon, it was no disgrace to form part of the background.

Boswell was, perhaps, to use Johnson's expression, too "unscottified" to take any special interest in Fordyce merely because he was a Scotchman. Nor was it any recommendation that his fellow-countryman was, like himself, an inveterate frequenter of taverns and coffee houses, and sometimes drank a good deal more than was good for him, for such habits were common to most men in London at the time. The lack of interest was perhaps due to the fact that Fordyce was no conversationalist, a defect which Boswell would have found it hard to overlook even in a man who was a distinguished physician, a Fellow of the Royal Society and of the Royal College of Physicians.

---

* Read before a meeting of the Osler Society at Saranac Lake, December 13, 1927.

George Fordyce was born in Aberdeen in 1736. By the age of fourteen he was a Master of Arts of Aberdeen University. His obtaining his degree at such an early age, however, was probably owing more to the leniency of the university examiners than to his precocity. He first gazed upon the "noblest prospect which a Scotchman ever sees," the road to England, at the age of fifteen when he went to Uppingham in Northamptonshire, to live with his uncle, John Fordyce, as his pupil. Four years later he went to Edinburgh to become the pupil of the great Cullen, his "learned and revered master" as he was wont to call him in later years. In 1758 he obtained his M.D. from Edinburgh University and the same year set out for London, a formidable journey at the time, for it took, under favourable circumstances, sixteen days. A year after Fordyce left Edinburgh he wrote to Cullen from London, "In the winter I attended Dr. Hunter's courses, and I dissected three bodies, so that I believe, except you advise me otherwise, I have done with anatomy. After this course was over, I went to Chelsea, and have attended the gardens there during the summer, which, with a little physiology, has been my principal employment this summer."

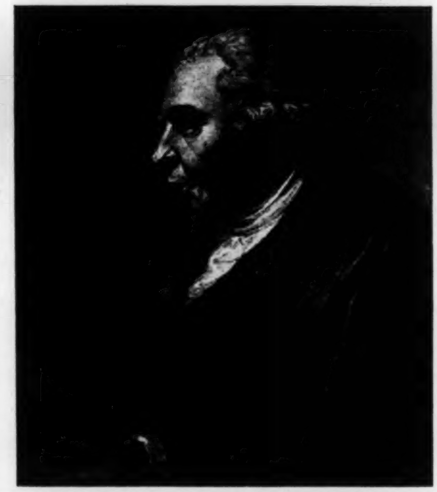


FIG. 1. GEORGE FORDYCE. (1736–1802.)

Early in 1759 Fordyce went to Leyden to study under Albinus, but returned to London before the end of the year and settled down in Essex Street, Strand, to practice his profession. His relatives disapproved of his staying in London, because his patrimony being spent, they were afraid that they would have to support him during the time he was waiting for patients. It must have taken a good deal of courage to stand out against the wishes of his family if his uncles took a part in the opposition, for they are said to have numbered twenty.

If we could see London as it was in 1759 our first impression would probably be one of disgust. In wet weather, mud, and in dry, dust, pervaded everything. Dirt was as much a part of existence as air, water or food. The streets were littered with ashes, worn-out tinware and fragments of broken glass. Scavengers emptied their carts in them to save themselves the trouble of going to the dumping grounds. In summer when the weather was dry there were clouds of dust, myriads of flies, and a great variety of evil smells. The lot of the pedestrian was a hard one. At any moment the wheels of passing vehicles or the hoofs of horses might splash him from head to foot with mud. It is because in the eighteenth century people who went on foot were exposed to this risk that there are to this day so many alleys and courts in

London that it is possible to walk across the city without going along any of the streets. Filth, liquid and solid, was thrown out of the windows, no pains being taken to spare the clothes or the feelings of the passers-by. When it rained, the water from the roofs, directed by hundreds of dragon-mouthed spouts, fell in cascades upon the pavement. To protect one's self with an umbrella required more strength of mind than most people had, for it exposed one to the jeers of the mob, and the active hostility of chairmen and the drivers of hackney coaches.

The pavement was on the same level as the rest of the street, and was often submerged from overflowing kennels. It was generally marked off by a row of low iron posts, which in some places were connected by chains. Where the posts and chains were absent, drivers of coaches and waggons invaded the pavement without regard to the rights of those who went on foot. Though only four or five feet wide, it was encroached upon in many places by the large bow windows of shops, and by doors which opened outwards. It was often blocked by waggons placed across it to be unloaded, and by casks, packing cases and goods which merchants left in front of their warehouses. There were, in addition, such pitfalls as areas without fencing, and unguarded openings into cellars into which the pedestrian might fall, especially at night. By day the streets, even in the better quarters of the town, were crowded by a noisy rabble of vagabonds, porters, sailors, and hawkers. Beggars of revolting appearance were numbered by thousands. There was a great deal of rowdiness in the streets. Fist fights were common and attracted crowds of spectators who obstructed traffic. In the evenings, peaceable citizens were sometimes set upon and hustled by gangs of shouting apprentices who had undertaken, for their own diversion, to clear the streets. There were great numbers of bootblacks, and no doubt employment for them all, for it was no uncommon thing for the well-to-do Londoner to have his boots blacked a dozen times a day. The equipment of the bootblack consisted of a three-legged stool, a mixture of soot and oil contained in a pipkin, a pair of stiff brushes and a cast-off wig that was used to wipe off mud or dust.

If the lot of the pedestrian was hard during the day it was still worse at night. Such attempts as were made to light the streets were of the most primitive kind, and consisted in the use of what were called "parish lamps." These were small tin vessels, half-filled with liquid blubber, in which a piece of cotton twist acted as a wick. A thick, partly opaque glass protected the flame against the wind and prevented the light from being too easily seen. These lamps, which were placed on poles or brackets at intervals of about a hundred feet, were attended to every day by certain gentlemen, each of whom was provided with a rickety ladder, a formidable pair of scissors and a tin of oil. Grosley, a Frenchman, who wrote an account of his visit to London in 1756, says that he saw one of these men drop a globe on the head of a passer-by. Although a scalp wound was caused, the incident was taken in good part. The Londoner who went on foot knew his place and probably looked upon such an incident as too trivial to be resented. The darkness of the streets at night made it necessary for those who could afford it to employ "link boys" to light them on their way. These men were sometimes in league with the foot-pads who infested the streets. After leading the way to a suitable place they would put out their torches and vanish, leaving their employers to be robbed. It must be remembered that the real terror of a London winter was not the cold or the wet, but the many hours of darkness.

The responsibility for enforcing the law and maintaining order rested with the parishes. Some of them made no arrangements at all. Two employed Chelsea pensioners, aged veterans of the army. Most parishes, however, employed night watchmen. These men, many of whom were old and feeble, were recruited from the dregs of the population. They were equipped with rattles, long staves and lanterns. By tapping on the pavement with their staves, sounding their rattles and showing their lanterns, they gave law-breakers timely notice of their approach; not however that it was always found worth while to take the hint. The incompetence of the watchmen made them the subject of a good deal of facetiousness. They were officially supposed to keep "watch and ward," but it was said that what they really kept was "shiver and shake," for they shivered with cold, and shook with fear. They were described as "persons who were hired by the parish to sleep in the open air." At such times as they ventured forth from the dirty hovels which were used as watch houses they went about calling the hours and the state of the weather. At all times they provided a butt for the amusement of drunken and hilarious young men. It is not altogether to be wondered at that the watchmen were neither efficient nor honest, for they were paid only 8/- to 10/- a week.

One degree higher than the watchmen were the constables, who were also parish officials. They were attached to the magistrates' courts and brought there such prisoners as could not purchase their liberty with a bribe. The taking of bribes by the constables was a continual grievance of the "trading justices," because the latter, instead of receiving a salary, lived upon the fines which they imposed. The only law officers who were at all efficient were the Bow Street runners. They, however, numbered not more than a dozen. Theirs was a lucrative occupation, for forty pounds, "blood money," was paid to the officer who arrested any one afterwards found guilty of a capital offence. There were 160 crimes for which the punishment was death without benefit of clergy. On one occasion no less than 40 persons were hanged. Some of the runners made considerable fortunes. One left £30,000, another £20,000.

There were three means of conveyance available for public hire; hackney coaches, sedan chairs and boats plying on the Thames. The coaches were very rickety, very dirty and very slow; but then, they were also very cheap. A more fashionable means of getting about was the sedan chair. The chair-men were mostly Irish, a "thick-set, thick-legged lot" who introduced an element of playfulness into their laborious occupation by squeezing chance pedestrians between the chair and the wall, or by digging the ends of the chair poles into their ribs. The ferries were rowed by water-men who were notorious for their gift of abusive raillery and their habit of extortion.

In his visits to his patients the physician of the latter part of the eighteenth century drove in his private coach with one or two pairs of horses. There must have been many occasions when, the narrow streets being blocked by traffic, he found himself obliged to get out and walk. The ferry was often the quickest means of getting from east to west. It was a much easier way of crossing the Thames than by either of the two bridges which existed in 1759, for they were usually choked with traffic.

It might have been expected that in an age of mud and dust, the men, if not the women, would have been careful to dress in clothes made of the most durable material. The reverse, however, was true of the well-to-do people. One gentleman wears "white with silver lace," another a coat of Tyrian bloom satin, and a third, a pea-green coat and green silk breeches, "bitterly tight." The physician was more sedate in his appearance. About the middle of the eighteenth century he usually wore a huge three-tailed periwig, a black velvet or silk coat and breeches, silk stockings, buckled shoes, lace ruffles and carried a gold-headed cane with a pomander on top. At an earlier date he had come forth resplendent in a scarlet cloak, deep ruffles, with a sword by his side, a cocked hat under his arm, carrying a gold-headed cane shaped like a parish-beadle's staff. John Huxham, the best known physician in the west of England during the middle of the eighteenth century, used to have a footman to carry his gloves when he went to see his patients. Dr. Fothergill, who had one of the largest practices in London about the same time, wore, "a coat, waist-coat and breeches of 'nearly white' superfine cloth and a medical wig." The wig filled an important part in eighteenth century life. It was useful in many ways. It deprived grey hairs and baldness of their terrors; it protected the head from draughts; it allowed the scalp to be shaved, no small advantage at a time when personal cleanliness was not carried to any great excess, and lice were almost normal on the heads of those who wore their own hair, as did children and servants. Lace ruffles and *pediculi corporis* were by no means incompatible. Topham Beauclerk, who was distinguished for the blueness of his blood, the elegance of his manners and for his scholarship, is known to have been a popular host for these little parasites.

It was a leisurely age. The well-to-do people had their breakfast of tea and bread and butter at nine o'clock, and dropped into a tavern at ten for a "morning glass." The usual dinner hour was four, by which time the day's work was over. After dinner, men went to their favourite coffee house or tavern, to read the news-sheets, to talk, to gamble, but most of all, to drink. At ten, if they were sober enough, they went home and had supper before going to bed.

The sanitary arrangements of London were of the most primitive description. Each house had its own cesspool, either underneath the cellar or in close proximity outside. Pipes were laid in some houses for the purpose of conducting the overflow of the cesspools into the open drains of the city, but this had to be done secretly, because it was against the law. The water-closet was first introduced in 1775 and was no doubt looked upon as a dangerous innovation. It was not until 1828 that its use had become general in the houses of the well-to-do people. The water supply of the better part of the town flowed through pipes made by hollowing out the trunks of trees. One end of the tree trunk was made to taper so that it would fit into the end of the next one, which was prevented from splitting by a metal band. Of course such joints were defective and allowed the entrance of surface water contaminated by the overflow from open drains and from cesspools in the vicinity. As late as 1810 it was no unusual thing in some parts of London for the water supply to fail for two or three weeks at a time. Naturally enough, water was not used as a beverage. Even the miserably fed children in the parish workhouses were supplied with small beer to drink.

The slums were of vast extent. They contained labyrinths of courts within courts, and alleys off alleys. So narrow were some of the alleys that a wheelbarrow could not be taken through them. Little or no attention was given to this part of the town by the authorities in charge of paving, so that walking in the slums, for the most part of the year, necessitated wading through deep mud. Houses stood back to back, with almost no intervals between them. There was no piped water supply. Drinking water was obtained from wells sunk in ground polluted by the sewage of hundreds of years. The waste water and excreta in each house formed a pool in the cellar. This pool was usually covered over by loose planks and the space about it occupied by tenants who could not afford the rent of the miserable rooms above. In some of these inhabited cellars, liquid from neighbouring cesspools soaked through the walls and dripped upon the floor. The surface water was not polluted only by sewage. It was still the custom to bury the dead within the limits of the metropolis. The graveyards were shockingly overcrowded. In the poorer quarters of the town the dead were buried in great pits, which were kept open until filled with bodies almost to the top. It was long before this abuse was remedied. Even as late as 1853, Charles Dickens drew attention to it in "Bleak House."

> . . . and bears off the body of our departed, to a hemmed-in church-yard, pestiferous and obscene, whence malignant diseases are communicated to the bodies of our dear brothers and sisters who have not departed . . . Into a beastly scrap of ground which a Turk would reject as a savage abomination, or a Caffre would shudder at, they bring our dear brother here departed, to receive Christian burial . . . here they lower our dear brother down a foot or two; here sow him in corruption; an avenging ghost at many a sick bedside, a shameful testimony to future ages how civilization and barbarism walked this boastful island together.

Wherever there was a space open to the sky there were mounds of refuse and garbage. Perhaps it was because the government thought that nothing could add to the woes of the poor that it levied a tax on windows. Tenement houses, therefore, were built with as few as possible, and there were none in the passages, closets or cellars. Even the dweller in the garret had to be satisfied with a minimum of fresh air and light, the only things, besides misery, which he might reasonably have expected to get for nothing. In such circumstances it is not to be wondered at that the slums were vast incubators of disease. There was no public health service. Smallpox, typhus, relapsing fever, dysentery and malaria were endemic at all times and often epidemic. The death-rate of London greatly exceeded the birth-rate, and the population would have been a steadily decreasing one had it not been for the constant immigration from the country districts of England, Scotland, Wales and Ireland. In 1757 it was said that two-thirds of the population of London had been born elsewhere. The infant mortality was appalling. During the first half of the century three-quarters of all the children born died before the age of five. Later there was a great improvement and only two-thirds of them died. The high mortality was due to harmful methods of infant management. Tradition ordained that the newly born infant should be swathed in so many layers of tight clothing that he could only with difficulty breathe and move. Breast-fed children were weaned at the end of the second year. The most popular material for artificial feeding was "water-pap," bread soaked in water. Cow's milk was often found to cause serious illness. Nor was this to be wondered at when one considers the milk supply of London at the time. The milk dealers were hawkers rather than shopkeepers. A writer of the time describes them as having "neither character, decency, manners nor cleanliness." They kept their surplus supply of milk in the miserable cellars in which they lived, and used the tainted water from pumps, wells, and even horse troughs to dilute the milk and to rinse their pails. Large as was the average number of children in each family during the eighteenth century, as a rule few lived to grow up. Three well-known examples may be given. Queen Anne had five children, four of whom died in infancy, and one at the age of eleven. Gibbon, the historian, lost five brothers and one sister in infancy. The mother of Dr. Lettsom, a colleague of Fordyce, had twins seven times. Of all these children only two survived to reach manhood.

Infant mortality was greatest in the parish workhouses for in them wilful neglect was combined with ignorance. It was said that in one parish, out of 500 children only one survived to reach adolescence. Jonas Hanway's investigations forced him to the conclusion that the difficulties of obtaining particulars in some parishes were due to the fact that the parish officials were loath to admit that all the children entrusted to their care had died. The London Bills of Mortality are not uninteresting to examine, though they lack the prosaic accuracy of modern vital statistics. Among the causes of death we find "tisick," "head mould shot," "liver grown," "purples," and "twisting of the guts." Infants who died before the age of one month are spoken of as "chrisomes." The unfortunate person who died as a result of hernia is described as "bursten." Dysentery was called "plague of the guts." There is something almost poetical in attributing death to "rising of the lights."

The poor people who had been born in London were pale, undersized, wretchedly clad, and always more or less ill. Their children were half-starved, rickety and had, nearly all of them, "cheese-cutter" legs. It goes without saying that young and old had scabies, and were infested with lice. The miserable wretches who inhabited the slums, when they were too ill to drag themselves about, were utterly forlorn. With two or three exceptions, the hospitals were open only to patients who brought a recommendation from one of the governors and had a certain amount of money. Moreover, patients were admitted only upon one day a week, unless suffering from a fever. Such arrangements must have been highly efficacious in preventing overcrowding, for by the time they had all been made, the patient was either well, too ill to be moved or dead. Only rarely did medical care reach the poor at their houses, and then it was at the hands of some ignorant but well-meaning apothecary, such as Johnson's humble servant and friend, Robert Levitt. Well-to-do people took very little interest in the state of the slums. They were content to believe that the miseries of the poor were due to their wickedness, instead of their wickedness to their misery. The clergy did not concern themselves with the poor in their parishes. There was no system of education. The result was that the children grew up without any conception of morals, and became thieves or prostitutes. About 1770 there were signs of better things. Charitable people began to establish dispensaries where the poor could go for advice and medicine and from which the doctors could be sent to visit them at their homes.

In 1759 when Fordyce returned from the continent there was no organized medical education in London. Such teaching as there was, consisted of a certain amount of clinical instruction which physicians and surgeons gave their pupils or "cubs" as they were sometimes called, in the wards of the hospitals. Fordyce announced to the public that he would give private lectures in chemistry. His first course was attended by only nine pupils, but as he was a newcomer and only twenty-three years old, he had no reason to be discouraged. It must be remembered that these lectures were begun before the discovery of oxygen, nitrogen, chlorine and ammonia. Carbon dioxide had been discovered some fifteen years before, and was still spoken of as "fixed air." Four years later he started, in addition, courses in materia medica and the practice of physic, subjects upon which no one in London had ever given private lectures before. His lectures began at seven o'clock in the morning and ended at ten. This routine he continued six days a week, all the year round, for thirty years. He was not a fluent lecturer. His delivery was slow and halting, interrupted by pauses so long that students unaccustomed to his peculiarities thought he had lost the thread of his discourse.

Fordyce was slow in building up a practice. Rough in his manner, careless about his dress, he used none of the blandishments which attract patients. His broad Scotch accent was no great asset at a time when the memory of the rebellion of 1745 still lingered in Englishmen's minds. Jeremy Bentham, who studied chemistry under him, described him as the "coldest of the cold Scotch." In spite of his lack of social gifts Fordyce was the most gregarious of men. He loved to be where people met and talked, and though he was a mine of information, he contributed little to the conversation. It is easy to believe that a man who was unobtrusive and a good listener was generally welcome in that golden age of talk. To indulge his fondness for tavern life and to find time for reading, he trained himself as a young man to do with very little sleep, and used often to start the day's work without having had his clothes off the night before. At a time when a man was branded as a milk-sop if he could not dispose of more than two bottles of port at a sitting, Fordyce was distinguished by the amount of port and brandy he could drink without showing the effects. There were times however, when he exceeded his capacity. There was, for instance, the night when he was hurriedly summoned from a tavern to the house of a woman of fashion. A somewhat incoherent patient, sheltered behind bed curtains, in a room lighted by one or two candles, presented a difficult problem to one whose gait was so unsteady that it was only with the greatest care that he had been able to make the journey from the door-way to the chair beside the bed. When, with some fumbling, he had gained possession of his patient's wrist, it was only to find that he was in no condition to obtain enlightenment from the pulse. A wave of remorse came over his befuddled mind, and unaware that he was thinking aloud, he said, with tipsy gravity, "Drunk, by God!" Then producing from his pocket some medicine which he happened to have with him, he mumbled a few directions and departed. Next morning when he was sadly reflecting that he must have lost a very desirable patient, he received a letter from her saying that she "too well knew that he had discovered the unfortunate state in which she was when he had last visited her, and she entreated him to keep the matter secret—in consideration of the enclosed." The letter contained a hundred-pound note.

In 1765 Fordyce was admitted as a licentiate of the College of Physicians. Two years later, he with some others, among whom were William Hunter and John Fothergill, founded the "Society of Licentiate Physicians" for the purpose of fighting for their rights in the College. Though many of the licentiates were distinguished physicians and some of them Fellows of the Royal Society, they had to pay dues to the College without having a voice in the management of its affairs. Moreover, they had little or no prospect of being elected to the Fellowship, since this was recruited from favoured individuals who were graduates of Oxford or Cambridge. The election to the Fellowship was something more than a matter of favouritism, however. The Fellows were real scholars. They were able to read the works of Hippocrates and Galen in the original Greek, as could most of the licentiates. Heberden was not only a Greek and Latin Scholar, but a Hebrew one as well. Many of the textbooks and all theses at this time were written in Latin. Cullen in 1757 began to deliver his lectures in English instead of in Latin, and the change was considered revolutionary. When one considers how little real knowledge of disease there was, and how injurious was much of the treatment, one suspects that the reputation for being learned was of no little importance in humbugging the public into treating the physician with respect; that it was as much a part of his equipment as his gold-headed cane, his solemn manner, his snuff-box and his coach.

The hostility between the Fellows and the licentiates was so keen that on one occasion, in 1767, twenty of the latter proceeded to the building occupied by the College and forced their way into a meeting. Twenty years later, when the College decided to publish a new edition of the "Pharmacopoeia" and realized that none of the Fellows knew enough pharmaceutical chemistry for the purpose, they found it convenient to forget that Fordyce had been a rebel, and elected him a Fellow, so that they could obtain the benefit of his services. He is probably entitled to part, at all events, of the credit for removing from the pharmacopoeia, the famous Theriaca Andromachi, or Venice Treacle, with its 65 ingredients, including dried vipers, and also the Mithridate of Damocras, with its 50, among which were the bellies of lizards. The tide of reaction against the more glaring absurdities of the pharmacopoeia was at its flood. Earthworms, hog lice, prepared toads, snails and stag horns now disappeared from its pages.[1]

So great a reputation had Fordyce acquired in London by 1771 that he was appointed physician to St. Thomas's Hospital to succeed Mark Akenside, the poet. The change must have been for the better, for Akenside, the son of a Newcastle butcher, had been supercilious to his colleagues and brutal to his patients. At this time St. Thomas's Hospital was in St. Thomas's Street, near the south end of London Bridge. It was one of the hospitals reported upon by John Howard in his book, "An Account of the Principle Lazarettes in Europe." He says of it:—

> Some of the wards in this hospital are only eighteen feet wide: there are no testers, but semicircular irons for the curtains in winter. The wards were fresh and clean, except the three foul wards, in which there were twenty-seven women: these were very offensive and had not a window open. There were no water-closets. The bread was excellent. Clean patients pay a fee of 3/6 on admission, and a foul or venereal patient pays 10/6, besides 4d a day: all pay the nurses for washing their linen. A surety engages to supply the fees for his burial to the steward of the hospital. I am sorry to find such great quantities of beer brought from public houses into this and other hospitals. Here, and at Guy's, the patients easily get out, there being no proper attention at the gates, so that the adjoining gin shops often prevent the efficacy of medicine and diet.

In 1774, at the same time as Charles James Fox, Fordyce was taken into the Literary Club. Goldsmith proposed his name, and Johnson "eagerly seconded" it. The first meeting which he attended took place on March 25. During the afternoon of that day, Goldsmith, who was very anxious to be present, was obliged to take to his bed. He was suffering from a "low, nervous fever," and was dosing himself with James's powder, in spite of the protests of Hawes, the apothecary, who was attending him. Fordyce upon the receipt of a summons from Hawes, left the club, and hurried to Goldsmiths' bedside, where he added his expostulations to those of Hawes, but to no purpose. He continued his attendance, however, till Goldsmith died a few days later. Fordyce was present at the last meeting of the Literary Club which Johnson attended, when to quote Boswell, "Johnson looked ill, but had such a manly fortitude that he did not trouble the company with melancholy complaints." Boswell records not a word of the conversation which took place that night. Probably his mind was too full of pleasurable anticipation of the next morning's treat, for he was to go to Newgate to see fifteen men hanged.

---

[1] Signs of waning confidence had been evident before. The New Dispensatory by W. Lewis, published in 1785, mentions "Alcis Ungula" or "Elk's Hoof," and says of it, "The elk is a large animal of the stag kind met with in Muscovy and other cold countries. The hoof of the hinder feet has been celebrated against epilepsies from a ridiculous opinion that the elk himself is subject to disorders of this kind, and prevents or removes them, by scratching his ear with his hoof."

Fordyce attracted a good deal of attention in 1775 by some experiments which he conducted with Charles Blagden, M.D., F.R.S. The latter published an account of them in the Philosophical Transaction under the title "Experiments in an Heated Room." These two gentlemen exposed themselves to high temperatures in a room specially constructed for the purpose, and heated by what was called a "cockle." On one occasion the thermometer registered 260° F. The report says that eggs brought into the room were roasted quite hard in twenty minutes. In forty-seven minutes a steak was not only cooked, but had become almost dry. No harm seems to have been done to either of the experimenters, though afterwards they suffered for a while from unsteadiness of the hands, giddiness and tachycardia.

In 1776 Fordyce was made a Fellow of the Royal Society. Eight of the papers which he read at its meetings were published in the *Philosophical Transactions*. One of them, upon the subject of "muscular motion" was the Croonian lecture for the year 1787. In 1783 he was concerned with John Hunter in founding the "Society for the Improvement of Medical and Chirurgical Knowledge." At first there were only nine members, but later the membership was increased to twelve. Four of the members, Mathew Baillie, Edward Jenner, Everard Home and Anthony Carlisle, were young men at the beginning of distinguished careers. Baillie, the Hunters' nephew, afterwards became physician to St. George's Hospital and exerted a powerful influence upon the progress of medicine and pathology in England. Jenner, another of Hunter's pupils, was, by his one great discovery, to leave a name which will outlive that of his far greater master. Home, in spite of all the honours heaped upon him, and they included a baronetcy, died dishonoured on account of his infamous destruction of Hunter's manuscripts, after publishing their contents as his own observations. Carlisle became surgeon to Westminster Hospital and was knighted. He was one of the the leaders of the medical profession whom Thomas Wakley, the first editor of the *Lancet*, in his fight for medical reform, fixed upon as a butt for his malignant ridicule.[2]

---

[2] The following are some extracts from the *Lancet*. "A pupil informs us that on Saturday week, Sir Anthony Carlisle defined medicine to be 'an art founded in conjecture and improved by murder.' This is just the expression that one would expect from the crusty mouth of an oyster." March 13, 1830.

"The Oysterian Orator is again afflicted with an attack of his old complaint—the gapes." September 21, 1833. In this issue the *Lancet* said that Carlisle's Hunterian Oration was "despicable trash."

"We next introduce on the scene that most vain-glorious and irritable of men, Sir Anthony Carlisle; lost in the most heartless affectation, we find none of the dignity of the professional character in this individual.... Sir Anthony has a tolerable knowledge of anatomy, but his physiological views are

Another medical society which owed its origin to John Hunter and Fordyce was the "Lyceum Medicum Londinense," which was started in 1785. The meetings were held at Hunter's lecture room in Castle Street, Leicester Square. Most of the members were either medical students or young men commencing to practice. In the latter class were Abernethy and Astley Cooper, the two best known surgeons and teachers of surgery in London during the early part of the nineteenth century. Abernethy founded the medical school at St. Bartholomew's Hospital. He, more than any of his contemporaries, devoted himself to carrying on the teaching and methods of John Hunter. Cooper became surgeon to Guy's Hospital. He was the first to ligate the aorta; without an anaesthetic be it remembered. Another member was Gilbert Blane, who served as physician to the navy under Admiral Rodney, and later, after settling in London, became physician to St. Thomas's Hospital. He was responsible for the promulgation of an admiralty order enjoining the use of lemons as an article of diet, a reform which finally banished scurvy from the navy.

John Hunter exercised a dominating influence on both these societies. He was at the time they were founded the best known surgeon in England, with the possible exception of Percival Pott. He was the foremost anatomist, comparative anatomist, physiologist, pathologist and biologist of his day. His income from his practice was £5,000, but it was not large enough to cover the expenditure into which his reckless extravagance drove him. He had an establishment in Leicester Square, which included a conversazione room, a dissecting room, a lecture hall, a printing press and a museum, besides the accommodation necessary for himself, his family, his six pupils and his fourteen servants. At great expense he had built, below the level of the street, stables, the entrance to which was by means of a great drawbridge. There was a yard with an immense glass roof over it where he kept the skull of a whale. Perhaps it was here he kept the "Enormous Electrifying Apparatus," the "Splendid, but Unfinished Air Pump Invented by the Earl of Bute," the "Grand Chemical Furnace," and the "Magnificent and Highly Finished Turning Lathe," which were mentioned in Clift's inventory of Hunter's effects. Surely, never even in the medical profession, was there a more gullible picker-up of bargains.

At Earlscourt, then a hamlet two miles outside London, he had an estate, with a villa, conservatories, farm buildings, a menagerie and a fish pond. Here he kept the buffaloes he is said to have harnessed and driven through the streets of London, the Highland bull he used to wrestle with, and which once nearly killed him, the leopards which, single-handed and unarmed, he forced back into their den when he found them trying to escape. Here he observed, experimented and dissected. It was here that he boiled the body of the Irish giant O'Brien to obtain his skeleton, after paying £500 to the undertakers for a little timely blindness.

---

indistinct: he is a timid operator, and his practice is capricious...What he calls his annual series of clinical lectures are puerile and inane in the highest degree, and the feeling of disappointment entertained by the pupils has been quaintly but forcibly expressed by M. B. Broke—'We paid for pabulum and he gave us flummery.'"

A man of less stout courage would have been crushed under the financial load of these two properties, but Hunter could still find money to spend lavishly upon his museum. Altogether he spent £80,000 upon it. In his insatiable thirst for knowledge, though he knew from his repeated attacks of angina pectoris that the figure of Death was always at his elbow, he went on devoting every minute he could steal from his practice and from sleep, to his researches, and to recording his observations and thoughts. It would be difficult to find in the whole history of medicine a more interesting figure than this great scientist who could not write without making the most flagrant mistakes in spelling; than this great philosopher who was subject to fits of violent passion, during which his language would have disgraced a Thames water-man; than this fashionable surgeon who visited his patients with the reek of the dissecting room in his clothes! A kindly humorous man in the eyes of those who knew him best, but nevertheless, a good hater and well hated by his enemies. One of the greatest testimonials to his genius was given by his enemies after his death when they found it worth while to pay one of their number to write a biography of Hunter for the sole purpose of belittling his memory. The biographer, Jesse Foot, is saved from kindly oblivion by his having played the part of a jackal howling about the carcass of a dead lion. The book is a miracle of dulness.

The reputation Fordyce acquired in London as a physician was a very high one, though he seems to have had a large practice only during the last few years of his life. His intellectual interests were by no means confined to medicine and chemistry. Under the title "Elements of Agriculture and Vegetation" he published a course of lectures which he delivered to a class of well-to-do young landowners. How he can have acquired the practical knowledge to qualify him to teach these subjects it is somewhat difficult to see, since from childhood up to the age of twenty-three he was engaged in preparing himself for his profession, and afterwards he never left London for more than a few hours at a time. He published in *Medical and Chirurgical Transactions*, a paper entitled "An Attempt to Improve the Evidence of Medicine," which contained a form for writing case reports. His two best books were his "Elements of the Practice of Physic," which seems to have had a considerable popularity as a textbook, and his "Dissertations on Fever."

The "Practice of Physic" is an octavo book of 387 pages, printed in large type with considerable intervals between the paragraphs. The first third of the book is devoted to physiology, under the titles, "The Natural History of the Human Body." After reading it one wonders if knowledge so scanty, and conclusions so vague, can have had any influence at all in guiding the practitioner in his treatment of disease. Under the heading "Chemical Properties of the Fluids" we learn that blood serum contains "common sal ammoniac, phosphoric ammoniac, and frequently selenites or fixed ammoniacs." Coagulation is described as a "separation of an animal or vegetable matter from the water in which it is contained." Nothing was known of the digestive ferments or of hydrochloric acid in the stomach. Cheselden, who died in London in 1752, believed that digestion was a "corruption or putrefaction" of food, due in some way to the saliva. But then he was a surgeon, a member of what was, in the estimation of the public, an inferior order of medical man, so perhaps his having an opinion of his own in a matter of physiology may have been looked upon as nothing more than an impertinence. The only known function of the liver was the secretion of bile, a fluid, the chemistry of which, was summed up in the statement that it was "of an oleaginous viscidity, consisting of a solution of a solid matter in water." Most of the space devoted to the consideration of the urine deals with the sediment of urates, which is called "separating mucilage."

In treating of the heart nothing is said of the heart sounds, the apex beat, the cause of the pulse, the nervous control or of blood pressure. The part devoted to respiration deals almost exclusively with the circulation in the pulmonary and bronchial vessels. Fordyce offers no explanation of the heat of the body. He rejects the theory held previously by many observers, that it was produced by friction between the red particles of the blood, and between the blood and the vessel walls. The nervous system is discussed in a few paragraphs made up of somewhat vague generalizations. Nothing is said of the functions of the different parts. Reflex action is described, but not called such. The grey matter is called the "cineritious part." The second division of the book includes the "Doctrine of Fevers and the Doctrine of Inflammations." The fevers described are "The "Plague," "the Violent Fever," otherwise called, the "Putrid, Malignant Jail, Camp, Hospital or Petechial Fever," the "Inflammatory Fever," which was probably due to sepsis, and the "Low, Nervous Fever," or what is now known as typhoid, which is said to arise "most commonly from affections of the mind and from cold." Last of all comes malaria under the heading, "Intermittent and Remittent Fevers."

The rest of the "Practice of Physic" is taken up by the "Doctrine of Inflammation" which includes "The Inflammation of the Womb" and "The Venereal Disease." Coryza, under the heading, "The Catarrh," covers 20 pages, whereas pneumonia, or rather, "The Peripneumony" is thought worthy of only 11. Peritonitis, "The Inflammation of the Intestines" covers 7 pages. It is to be treated by bleeding at short intervals until the pulse becomes soft. Modern practice would justify Fordyce's warning against purgatives, and his approval of what are called "glysters." "The Diseases of the Kidneys" are dealt with in 6 pages. The symptoms of all the surgical diseases of the kidney are combined to form one clinical picture. Pericarditis is found worthy of only 8 lines!

Treatment, inappropriately described in this book under the heading "Cure," is nothing if not energetic. A simple cold, for instance, is to be "treated by bleeding, purging, blistering, by the administration of opiates, demulcents and relaxants.[3] Therapeutics in the eighteenth century, based as it was on tradition, can rarely have benefited the patient; sometimes it was harmless, more often it was harmful. There were times when it was not only harmful, but horribly cruel. For instance, in 1778, a Dr. Vaughan, finding that his treatment of a boy of eight, suffering from hydrophobia, was ineffectual:

---

[3] What, for instance, could be more harmless than the treatment of whooping cough, or "chin cough" as it was more commonly called, by the application to the patient's feet of an ointment composed of equal parts of garlic and hog's lard?

> . . . resolved to put in practice the desperate remedy mentioned by Van Helmont, of throwing the patient into cold water, and keeping him there till he was almost drowned. With this view, a large tub of cold water, well saturated with common salt, was prepared, into which the poor boy was plunged over head and ears, and there held until he ceased to struggle. He was then taken out again, and the same operation repeated until he became so quiet that the doctor was under the apprehension that a total extinction of life would take place. He was then wrapped up in a blanket, and put to bed, and he remained more quiet than he had formerly been, but all this former restlessness returned, his pulse sank, and he died about two hours later.

The more enterprising of our predecessors in the art of medicine seem to have performed a function somewhat similar to that of Asrael, the Mohammedan Angel of Death, whose duty it was to separate souls from bodies. Asrael, however, seems to have had no objection to performing the operation painlessly when he could.

The "Dissertations on Fever" were published in three volumes. In the first one, the full title of which is "A Dissertation on Simple Fever, or in Fever Consisting of One Paroxysm Only," Fordyce makes the statement, astonishing to modern ears, that an increase in body temperature is not always present in fever. He admits that there is no pathognomonic symptom in fever. The diagnosis is to be made by a general estimation of the patient's symptoms and appearance. He disposes of those who believe that increased pulse-rate is a pathognomonic sign of fever by the ironical statement, "if a woman should suddenly meet the object of her love her pulsations are often one hundred in a minute, she then likewise is afflicted with fever."

Fordyce married, very shortly after coming to London, a Miss Stuart, whom he had met when he was a student in Edinburgh. The marriage was anything but a happy one, and after living together for thirty years, the couple separated. Mrs. Fordyce seems to have been a clever, vivacious woman, with a taste for riding hobby horses. It would be interesting to know whether Fordyce's habit of taking only one meal a day, and that meal away from home, was a result or a cause of his domestic difficulties. It was generally believed among those who knew him that he had been led to adopt the custom through reflecting on the habits of wild animals, especially the lion, though what analogy he could find between that animal and himself, a respectable London physician of sedentary habits, it is not easy to see.

There were four children of the marriage. One of the sons died in infancy, the other was drowned at the age of eleven while bathing in the Thames opposite the foot of Essex Street. One daughter, Mary Sophia, married Samuel, the brother of Jeremy Bentham. Margaret, the second daughter, remained single. During the latter years of his life, Fordyce, as might have been expected from his mode of living, suffered severely from gout. He died on May 25th, 1802, at his house in Essex Street, probably from what is now known as cardiorenal disease. The manner of his death was indicative of a fine consideration for the feelings of others. His daughter Margaret was sitting at his bedside reading to him when he suddenly interrupted her by saying, "Stop! Go out of the room. I am going to die." She left the room immediately to summon help, and on her return found that her father was dead.

BIBLIOGRAPHY

Besant, Sir W. London Life in the Eighteenth Century. Lond., Black, 1903.

Buer, M. C. Health, Wealth and Population in the Early Days of the Industrial Revolution. Lond., Rostledge, 1926.

Creighton, C. History of Epidemics in Britain Camb. Univ. Pr., 1891–94.

Fordyce, G. Dissertations on Fever. Ed. 2, Lond., Crowder, 1800.

Elements of the Practice of Physic, in 2 parts. Ed. 4, Lond., Crowder, 1777.

Obituary notice. *Gentleman's Mag.*, 72, pt. 1, 588, 1802.

Forsyth, D. History of infant feeding from Elizabethan times. *Proc. Roy. Soc. Med.*, 4: Sect. Dis. Child., 110, 1910–11.

Forster, J. Life and Adventures of Oliver Goldsmith. Lond., Bradley & Evans, 1848.

Fox, R. H. Dr. John Fothergill and His Friends. Lond., Macmillan, 1919.

George, M.D. London Life in the Eighteenth Century. N. Y., Knopf, 1926.

Howard, J. Account of the Principal Lazanettos in Europe. Lond., Johnson, 1791.

Jephson, H. Sanitary Evolution of London. Lond., Unwin, 1907

Lee, W. L. M. History of Police in England. Lond., Methuen, 1901.

Lewis, W. New Dispensatory, containing the Elements of Pharmacy. Lond., Nourse, 1785.

Newsholme, Sir A. Evolution of Preventive Medicine. Balt., Williams & Wilkins, 1927.

Outey, D. Life of John Hunter. In: Works of John Hunter, with notes, ed. by James F. Palmer. Lond., Longmans, 1835, vol. 1.

Paget, S. John Hunter. Man of Science, and Surgeon. Lond., Unwin, 1897.

Peachey, G. C. Memoir of William and John Hunter. Plymouth, Brendon, 1924.

Pitt, G. N. Reflections on John Hunter as a physician, and on his relation to medical societies of the last century. *Lancet*, p. 1270, Mar. 9, 1896.

Poor, G. V. London, Ancient and Modern, from the Sanitary and Medical Point of View. Lond., Caneu, 1889.

Quincy, J. English Dispensatory. Lond., Longmans, 1749.

Ryan, M. A succinct account of the life of the illustrious John Hunter. *Lond. M. & S. J.*, 2: 211; 353, 1836–37.

Thomson, J. Account of the Life, Lectures and Writings of William Cullen, M.D. Edin., Blackwood, vol. 1, 1832; 2, 1859.

Timks, J. Doctors and Patients. Lond. Bentley, 1873.

English Eccentrics and Eccentricities. Lond., Chatto & Windus, 1875.

Traill, H. D., and Mann, J. S. Social England. Lond., Cakell, 1904, vol. 1.

Underwood, M. Treatise on the Diseases of Children with Directions for the Management of Infants from the Birth. Lond., Callow, 1827.

CORVISART, HIS LIFE AND WORKS*

By B. BARKER BEESON, M.D.

CHICAGO, ILL.

JEAN NICOLAS CORVISART was born February 15, 1775, in the tiny village of Dricourt, not far from Vouziers, then a part of the Champagne but now included in the Ardennes Department. One writer has added the suffix des Marets to his name. At any rate the family was an old one and could be traced back to 870 A.D. It was ennobled in 1669, in the person of Philip de Corvisart, Lord of Fleury. Owing to strife between the magistrates and the French clergy, Parliament had been exiled from Paris. So the elder Corvisart left with his fellows and settled temporarily in Dricourt, returning to Paris soon after the birth of his son. The father was possessed of considerable means most of which was wasted on inferior paintings. For reasons of economy the subject of this sketch was sent early to live with an uncle, the parish priest at Vimille, a village adjacent to Boulogne-sur-Mer. When thirteen years old he entered the College of Saint-Barbe where he proved to be a lazy, mischievous and quarrelsome pupil, showing no signs of future greatness. Instead he devoted himself to outdoor sports. Originally intended for the bar he spent some time, most reluctantly, in the study of law. Helme tells of Corvisart's visits to several medical clinics in Paris and of the profound impression made upon him by the eloquence of Antoine Petit. He at once cast aside Justinian and his Codes and decided to enroll under the banner of Aesculapius. His father became very angry at this decision and literally kicked him out of the paternal home. Without means or influence Corvisart sought refuge in Hôtel-Dieu, the oldest hospital of Paris, where in return for acting as an ordinary nurse he was given board, lodging and most important of all, an opportunity to study medicine. By his vigilance, zeal and gaiety he soon became a favorite with both the physicians and the patients. Antoine Petit, Louis, Bucquet, Vicq-d'Azyr, Desault, Desbois de Rochefort and Portal were among his teachers. Corvisart frequently prepared the material for their demonstrations. While doing so, on one occasion he suffered a slight wound of a finger. Infection set in and only the skillful and devoted care of Desault saved him.

Although the youngest in his class Corvisart stood first. His inaugural thesis (1782) was entitled, "Is plethora sufficient to produce the menstrual evacuation?." Three years later the degree of Doctor-regent was conferred upon him by the Paris Faculty of Medicine and as was the custom he delivered a discourse. It dealt with the pleasures of medical study and the disappointments of medical practice. Bourdois de Lamotte says that the degree of Doctor-regent was obtained only after four years of study plus two additional years devoted largely to rigorous examinations. What was expected of the candidate was out of all proportion to what he had been taught, so a great deal of self-education was essential. The new Doctor-regent, in accordance with usage, tendered a banquet to his teachers and fellows. When the festivities were well under way Corvisart, according to Helme, could no longer converse save in Latin. Glass in hand and to the astonishment of all he suddenly burst into the adjoining room where the professors were dining, hiccoughing Horace, belching forth Juvenal, and abruptly ending the banquet.

---

*Read at a Joint Meeting of the Society of Medical History of Chicago and the Institute of Medicine, January 25, 1929.

Jean Nicolas Corvisart [1775–1821.]

Corvisart later became adjunct to the chair of anatomy and took part in the courses on operative surgery, obstetrics and physiology. He was also appointed physician to the poor of the parish of Saint-Sulpice. In the midst of this busy and useful career he was frequently obliged to borrow money. His chief aim, even when distressed, was to live in order to learn and to perfect himself by experience. Corvisart was very desirous of a hospital connection but refused a place in the new Necker Hospital when Madame Necker insisted that he don a wig. He had meanwhile contracted close friendships with Desbois de Rochefort and Desault as well as with Father Potentian, the Superior of the Charité Hospital. On the death of Desbois in 1788, Corvisart was designated to succeed him as physician to that hospital. From then on his reputation grew steadily so that when the medical school was created in 1795, he was unanimously chosen to occupy the chair of medicine. Two years later Corvisart was made Professor of Medicine at the Collège de France. In 1799 Barthez and he were made physicians to the Government. Later Corvisart was personal physician to Bonaparte as First Consul and with the advent of the First Empire he became chief physician to the Emperor, the Empress and the Court.

Corvisart was a member of the Academy of Sciences (1811) and of the Academy of Medicine (1820). Napoléon created him a Baron of the Empire as well as an Officer of the Legion of Honor and a Commander of the Order of the Réunion.

Owing to the demands of the court and government, Corvisart resigned his teaching positions in 1805 and was made professor emeritus. The customary pension was, at his request, set aside for the founding of a prize open to competition among the medical students. The prize was won, in 1848, by Corvisart's nephew, Lucien Corvisart who afterwards became physician to Napoléon III and assisted at the birth of the son of the latter's wife, the ill-fated Prince Imperial.

Lassus has emphasized Corvisart's critical sense, independence, powers of observation and scepticism. He chose his teachers particularly for their ability to impart information to others, being especially attached to Desault, A. Petit, Desbois de Rochefort and Bichat. Desbois is credited with doing much to make an observer of Corvisart for he held informal talks with his pupils in which diagnosis and treatment were thoroughly discussed. Along with a penchant for criticism Corvisart was endowed with common sense and therefore his diagnoses which at times seemed almost to be miraculous, were really due in a large measure to this combination. He was probably the first to carry out and insist on routine physical examinations, thus paving the way for what is now customary.

The story is told of a consultation between Corvisart and Boyer, the surgeon, in the case of a patient with a gastric complaint, "It is a catarrh," said Boyer. "No! it is a cancer," replied Corvisart, "Observe that leaden color and emaciation." On another occasion along with Dubois, also a surgeon and famous as the accoucheur who delivered the King of Rome, Corvisart was examining the bladder of an old senator who was stone deaf; so they spoke freely. "There is a calculus," exclaimed Dubois, "like a small nut, round and solitary." "Fine," said Corvisart, "and how can you consider this insignificant stone as the sole cause of what we see: this loss of weight this rapid weakening of all the organs. Look further, you ought to find a fungous growth or an ulcer which could cause all of these symptoms and the calculus as well." Agreeing with this Dubois explored still more with a sound. Suddenly he stopped and exclaimed, "You are right! I find a soft fleshy growth which is your fungus."

Upon seeing a certain portrait Corvisart exclaimed, "If the painter was exact the original of this portrait died of heart disease." "And," adds Pariset, "he was correct." Observation was termed by him the chief support of clinical medicine. Lassus refers to Corvisart as the physician physiognomist par excellence. On entering a room and at a distance of several meters he often recognized the disorder present. His scepticism was shown by one of his favorite sayings, "That which we know is but little compared to that which we must learn."

Corvisart was scrupulously honest and never gossiped. Generous with the poor, he insisted on adequate fees from the wealthy class. Even at the zenith of his career he was often morose, melancholy and preoccupied. He was courteous to physicians save to some of the older ones whom he termed Gothic and superannuated. Marital difficulties and the death of an only son are said to have accounted for his attitude toward life in general.

Corvisart's service at the Charité was a famous center of clinical teaching during his ten years there. Those who followed him through the wards in the forenoon, could go later to the Collège de France and hear the same cases discussed from the purely theoretical standpoint. His genius in organization and imperious authority resulted in a smoothly working organization with an almost military discipline. Dr. Réveille-Parise, then a medical student, attracted the attention of Corvisart one day at the Charité. The professor brusquely demanded what he had come for, to which the young man timidly replied that he came to study. "To study!" said Corvisart with a smile, "That is good, my friend. Here," pointing to the patients, "are the books which you need; but they are more difficult to read than the printed ones."

Much of his success was due to thoroughness of examination. Upon seeing a patient Corvisart first secured a complete history, followed by a general inspection, including an observation of the tongue, an examination of the pulse which he considered highly important, followed by percussion plus methodical palpation. As has been stated by Bourdois de La-Motte, Corvisart proved the superiority of the method of diagnosis by reasoning founded on facts over that based on theories which existed largely in the imaginations of their authors. Endowed by Nature with a remarkably acute hearing and sense of touch, he excited the admiration of his pupils when practicing percussion at the bedside.

Corvisart became greatly interested in percussion after reading a book on it by the Viennese physician, Auenbrügger (1760). He translated this work into French in 1808. When it was suggested that he write his own book on percussion Corvisart replied, "By doing that I would sacrifice Auenbrügger to my own vanity, a thing I shall not do, for I wish to revive his splendid discovery."

Corvisart realized the importance of percussion and emphasized it not only in his practice but also in clinics and lectures.

In 1797 he translated from Latin into French Max Stoll's "Aphorisms on the Knowledge and Cure of the Fevers." Stoll was apparently his medical idol and was continually quoted by Corvisart. Stoll also a Viennese clinician, had only a twelve-bed service but was a good observer, combining common sense with a thorough knowledge of medicine as then taught. His armamentarium comprised certain infusions for the renal filter plus camphor, serpentaria and mild purgatives.

In 1802 Corvisart translated the Aphorisms of the renowned Boerhaave.

His own work, entitled "Essai sur les maladies du coeur et des gros vaisseaux," appeared in 1806. A second edition followed in five years. Dr. C. H. Horeau collaborated in both of these editions. The third and last edition (1818) was got out by Corvisart alone. He also edited the "Materia Medica" of Desbois de Rochefort in 1789. Corvisart founded the *Journal of Medicine, Surgery and Pharmacy*, which went through forty volumes.

There has been much speculation as to who had the most to do with moulding Corvisart from the medical standpoint. Helme believes that Stoll largely influenced Corvisart, Boerhaave to a lesser extent. Desbois and Desault more so; but above all, Bichat. Bichat taught him the importance of autopsies in which respect he surpassed Stoll.

It would appear, strictly speaking, that cardiology as such did not exist prior to Corvisart. He really created cardiac symptomatology and made possible the differentiation between cardiac and pulmonary disorders. The distinction between functional and organic heart disease is also credited to him. Lassus is of the opinion that Corvisart's most important contributions to cardiology were: (1) the distinction between cardiac hypertrophy and dilatation, (2) the division of the clinical course of heart failure into three periods and (3) the connection between cause and effect in valvular lesions and heart failure. Corvisart is credited with being the first to explain heart failure mechanically. In his textbook he emphasized the frequency of organic heart disease, as well as the necessity for a cardiac symptomatology founded essentially on percussion. A dilated heart was termed by him a cardiac aneurism. He is said to have been the first to describe the dyspnea of effort and also the thrill perceived by the hand over the heart in mitral stenosis. By minute observation of the living, and deadhouse examinations, he was the founder of anatomo-clinical cardiology. His diagnoses were being constantly corroborated in this manner. By emphasizing percussion he paved the way for his pupil Laënnec who himself tells of having followed Corvisart's clinics from the time of his arrival in Paris in April, 1801.

Corvisart has been criticized by some for a lack of faith in drugs. It is true that he often relied upon common sense plus hygienic measures; but when powerful remedies were indicated he did not hesitate to employ them, as in the case of the Duchess d'Abrantès whom he cured of a serious gastrointestinal complaint by the use of opium.

Aside from the practice of medicine Corvisart was a most entertaining companion when with his cronies and he delighted in gathering about him not only physicians but also writers and artists. Robert Surcouf, a famous French corsair, who became a Baron of the Empire, was among his intimates. Both of them were connoisseurs as to food and wine along with the celebrated Brillat-Savarin who wrote on the physiology of taste and who formed part of their circle. Baron Alibert, the dermatologist, was also a close friend of Corvisart; in fact, to him was always entrusted the carving of the fowl or game at their dinners. At one of these affairs Pinard, a member of the French Academy, asked Alibert if it were true that one could dig a grave with his teeth. "Professional jealousy," replied Alibert. "That is a rumor noised about by the pick and the spade." On another occasion Corvisart was reproached for not acting quickly in a certain case, the patient even calling him Doctor Corbillard, which means hearse in French. He smilingly replied by saying, "Ingrate! Where would you be if I had not stepped in?"

The favorite authors of Corvisart were Voltaire and Molière and they influenced him very much. He was subject to ennui and was quoted as saying that to be a good physician one ought to be not more than forty since audacity was essential; at sixty one was good for nothing. Corvisart retired from practice upon reaching the latter age since he feared apoplexy. Bourdon tells of a visit to his luxurious home in rue Saint Dominque with its splendid library and statuary.

Cabanès states that Corvisart wrote comparatively little. He was fond of dreaming and reflecting, a trait common to such melancholic individuals. Dupuytren believed that Corvisart was always moody at heart. He was grave and reserved in the presence of strangers.

On December 6, 1808, the day of Saint-Nicolas, the leading artists, actors and actresses of France gave a fête in Corvisart's honor. Isabey painted twelve tableaux representing episodes in his life, one showing him at the age of thirty years receiving the twelve sous (about fifty cents) alloted him weekly by his father. Artists from the Opera sang the following, improvised for the occasion by Picard:

Gloire au Docteur' quand la fièvre nous presse,
Par son talent il nous rend la santé;
Gloire à l'ami! Des que notre mal cesse,
Par son esprit il nous rend la gaité.

No sketch of Corvisart would be complete unless mention were made of his relations with the great Corsican. Barbillon claims that the famous general and the celebrated physician first met during a reception given by Barras. Josephine presented Corvisart to Bonaparte asking at the same time, "To what disease will the General be the most exposed?" "To heart disease," replied Corvisart. "Have you written a book on that subject?" asked Bonaparte. "Not yet," was the reply, "but I shall publish one shortly." "Do it quickly," said the General, "and we shall discuss it together." Perhaps this conversation had something to do with directing Corvisart towards cardiology. The Revolution with its bloodshed and terror undoubtedly produced much cardiac disorder which may have also influenced his choice of a specialty.

Madame Lannes, afterwards Duchess of Montebello, is credited with recommending Corvisart to Josephine. According to others Corvisart was presented to Bonaparte, then First Consul, by Barras whom he had met through Lecouteulx de Canteleu, one of his first patients. A few days later, as the story goes, Corvisart was summoned to the Tuileries to examine the man of the hour. August 16, 1803 has been given as the date on which Napoléon was first treated by Corvisart. Being taken suddenly with a cough and pain in the chest along with bloody expectoration while in Brussels he had Corvisart sent for posthaste. Upon arriving Corvisart at once diagnosed the condition as pulmonary congestion but did not tell the patient this. A vesicant soon relieved the First Consul and also resulted in Corvisart's being made his personal physician. Napoléon in speaking of this incident said, "I could see that he understood my system and that he was the physician for me. I attached him to my person and heaped honors upon him." Bourienne, Napoléon's secretary, has been credited with recommending Corvisart, who had cured one of the Consul's brothers of an annoying ailment. Before seeing Corvisart, the illustrious patient, successively called in Sue, Pinel and Portal. None of them impressed him as did Corvisart who by his promptness, penetration and precision had a profound effect on him.

In March 1798, Bonaparte gave Corvisart a large carved mahogany chair which the latter placed in the consultation-room of his residence in the rue de la Victoire. This chair still belongs to the Corvisart family. Thus we know that these two were acquainted even before Bonaparte became First Consul.

The decree naming him as First Physician did not appear until 1804. By reason of this appointment Corvisart received 30,000 francs yearly, plus 4500 francs for office upkeep. Soon after his appointment he was asked to select a First Surgeon for the Emperor, and Boyer was given the post, much to the chagrin of Antoine Dubois who was an old friend of Corvisart.

Wednesday and Saturday were the days on which the First Physician was present when the Emperor arose as well as when he retired. Even though Napoléon was in his morning bath Corvisart was admitted at once. If the august patient was in good humor he often greeted him as follows, "Ah! there you are, great charlatan! How many patients are you going to kill today?" "Not many, Sire," was the usual reply. Napoléon once asked Corvisart if there were many sick in Paris. "Not so many, Sire," he answered. "How much money did you earn yesterday forenoon?" was the next question. "I do not know, Sire, I did not count it." "But, Corvisart, you must have earned at least 200 francs." "Not so much, Sire." "But you do not charge less than twenty francs per visit." "Pardon me, Sire, but I have no fixed fee; I sometimes take as little as three francs." "Good for you," said Napoléon, "you are indeed humane."

With Corvisart the Emperor banished all formality, speaking freely and often pinching or rubbing his ears, a trick of his with those of whom he was fond. It must not be imagined that Corvisart's position was a sinecure. Both as a mathematician as well as a disciple of Jean Jacques Rousseau, Napoléon was inclined to mistrust medical art, claiming that it was too conjectural. With his slow pulse (doubted by some), slight convulsive seizures perhaps akin to the Stokes-Adams syndrome and cholemic tint, he was hard to manage. He suffered more or less from dysuria which was attributed to excessive horseback riding. Bourienne says he was always cold and had a fire in his cabinet even in summer. He took a daily hot bath which was followed at Corvisart's suggestion by a vigorous rubbing with eau de Cologne. Napoléon's head was so sensitive that his valet, Constant, broke in his new hats by wearing them for a few days. Corvisart depended more on hygiene than on drugs in treating him. Napoléon also suffered from constipation which Corvisart treated with the following mixture: Tartar emetic .025 gm., soluble cream of tartar 30 gm., sugar 60 gm., and water 1000 gm. This was taken in glassful doses. The Emperor was in constant fear of poison and literally rolled about on the ground at the slightest indigestion. Corvisart reproved him for this saying, "Get up! What would be said if the master of the world were seen thus crushed by fear."

Napoléon was not partial to drugs, as a rule, believing that they should be reserved for exceptional cases. He often teased Corvisart about the uncertainty of medical practice, speaking on one occasion as follows. "But you yourself, have you never killed anyone, that is to say, have not patients died as a result of your remedies?" "Without doubt," replied Corvisart, "but I have not more on my conscience than Your Majesty who has caused cavalrymen to perish not because you have ordered the wrong maneuvre but because there was a ditch or a precipice in their path which could not be seen at the outset."

Charlatans received scant mercy at the Emperor's hands, but he had the highest opinion of such physicians as Corvisart, Larrey and Bichat. He was very much touched at the latter's early demise and remarked, "That he would have greatly enlarged the domain of medicine, so imperfect, yet so dear to humanity, if death had not stricken him at the early age of twenty-eight."

At the instigation of Corvisart, Bonaparte while First Consul, directed Citizen Chaptal, Minister of the Interior, to place in Hôtel-Dieu a marble slab dedicated to the memory of Citizens Desault and Bichat, as a testimonial to their services, the first-named having been the veritable restorer of French surgery and the latter having enriched medicine with many useful works.

Helme states that the three men upon whom Napoléon did not succeed in completely imposing himself were Fouché, the Minister of Police, Marshall Bernadotte afterwards King of Sweden and Corvisart.

Corvisart's well-known honesty was never more in evidence than when the Emperor notified him that his brother had been given an official position. "Permit me," cried Corvisart, "to refuse this place for my brother, because it demands a capacity which he does not possess. I know that he is poor, but that is my affair." Napoléon turned to the Minister who had made the recommendation and said, "Do you know many like that man there?" He often spoke of Corvisart as honest and capable, but somewhat rude.

Soon after the birth of the King of Rome, Corvisart deemed it wise to counsel the Emperor as follows: "Sire," said he, "this child should fulfil your last wish. Consider from what a position you have arisen in less than ten years: lieutenant, captain, brigadier-general, general-in-chief, First Consul, Emperor, spouse of an Austrian Archduchess and the father of a male child. You have reached the summit of the Wheel of Fortune and of great renown. Stop! Sire, or Destiny may desert you and then nothing remains but downfall and disaster." "Well," replied the Emperor, "that was just such a speech as one would expect from a native of the Champagne."

It has been said that the three men whom Napoléon esteemed the most for their honesty and frankness were Larrey, Percy and Corvisart, all physicians.

For some years Corvisart was wont to go hunting on Saturday, leaving no word as to his whereabouts so as to remain undisturbed. On a certain Saturday in 1811 the usual visit found Napoléon in excellent health, so the First Physician went hunting but where no one knew. As luck would have it the Emperor was taken with a violent colic after luncheon which was, as usual, eaten very hurriedly. Corvisart could not be located so Yvan, Ordinary Surgeon to His Majesty, was called and quickly relieved him. Hearing of this Corvisart did not wait for the next regular day but called on Napoléon the following Monday. When he saw him the Emperor hastened to Corvisart and taking his hands exclaimed, "Well, Sir! if I am seriously ill I might die while looking for you." Napoléon did not harbor a grudge against him on account of this for soon afterward he gave Corvisart a key to his private hunting preserves. Thereafter the First Physician always left word as to his whereabouts.

Napoléon delighted in discussing medical questions with Corvisart of which the following is an example. One day after the Egyptian campaign he spoke of the bubonic plague, saying that it was contracted rather by inspiration than by contact and that its greatest danger was in the fear it aroused which rendered it more dangerous to those in dread of it. Moral courage is the best preventative. He claimed to have proved this by touching many soldiers ill with the plague at Jaffa and also stated that he had saved many of them by bolstering up their morale by assuring them that they did not have the dread disease.

Las Cases and Comte Molé have both shown that on several occasions Napoléon attempted to study anatomy on the cadaver. These séances under the direction of Corvisart came to naught because the Emperor's delicate stomach forbade his going further. Another time Corvisart brought to him part of a human stomach which caused an instant emptying of Napoléon's own gastric organ.

As a token of esteem Napoléon even granted the requests of his chief physician for the release of English prisoners, something which the members of his family could not always obtain. Corvisart never asked a favor for himself but did not hesitate to interest himself in behalf of those whom he deemed worthy: as for example in the defense of Baudelocque, the obstetrician, who was unjustly accused of carelessness.

Corvisart delighted in collecting antiques, receiving many as presents from friends and admirers, Josephine and Marie Louise both being particularly generous in this respect. It is said that he preferred to unearth some curio himself rather than to receive it as a token of esteem. Having attended an auction where he purchased a cane which had belonged to Voltaire he visited Napoléon a little later, cane in hand. "Why the cane, Corvisart?" asked the emperor. "Have you been injured?" "No, Sire," was the reply. "I am merely availing myself of an ancient privilege of the chief physicians of the French rulers. For they presented themselves in this manner at the Court." "But the cane is not at all good-looking. Why should you carry such a ridiculous thing?" "Sire, this cane cost me a pretty penny but it was a bargain just the same." "Tell me, Corvisart, what did you pay for it?" "Fifteen hundred francs, Sire." "My heavens! 1500 francs?" "But Sire, it belonged to a great writer." "Who was he?" "Voltaire." "I do not care for him," was the rejoinder, "for his sarcasm ruined all which was worthy of respect in him. He undermined authority by corrupting the public morale."

After the victorious campaign of 1809, ending in the capture of Vienna, Napoléon was affected with a scaling dermatitis of the neck which proved very annoying. As he himself afterwards related, the celebrated Viennese physician Franck was summoned. He said that it would be very dangerous to apply a local remedy and drive the eruption inward, adding that the Elector of Trèves had gone insane as a result of such treatment in a similar condition. Being very much alarmed at this Napoléon ordered Duroc to send for Corvisart. He hurried to Vienna and when he noted the Emperor's condition laughed and said, "Is this the reason why Your Majesty has summoned me for such a long journey? A little sulphur will cure your eruption." When told of Franck's statement about the Elector of Trèves Corvisart ridiculed it, saying to Napoléon, "Such a comparison is ridiculous for he is an old man all worn out, while you are in good health." As Corvisart predicted, sulphur soon cured Napoléon's skin lesions. Having attended to his patient Corvisart was anxious to return home, but the Emperor wished him to remain and witness the impending battle, allowing him however to depart after three days at Schoenbrunn. While there Corvisart visited the son of Stoll, the clinician whom he so greatly admired. He also paid a visit to Franck whom he thanked most sarcastically for causing him such a long useless trip.

Corvisart did not approve of Napoléon's marriage to Marie Louise believing that matrimony with a younger woman would be disastrous. He was correct, of course.

Usually after seeing the Emperor, Corvisart called upon Josephine who, despite excellent health, always imagined herself to be ailing. She took purgatives on many occasions and wished the First Physician to even allow her to take more on account of violent attacks of migraine. Her inability to produce an heir to the throne naturally came under his attention; but Corvisart could suggest no remedy.

Corvisart first treated Marie Louise in April, 1810. Being summoned to the Tuileries he found the young Empress suffering from vertigo and weakness the result of a slight indigestion. Two years later following an abdominal examination she told her friend, the Duchess of Montebello, that she felt for a long time the imprints of Corvisart's fingers. Marie Louise proved to be very self-centered and always complained of poor health. Corvisart, knowing his patient, was never alarmed by her stories. He is credited with giving her pills made of bread, from the inside of the loaf, seasoned with sugar. With this pseudoremedy he cured her imaginary ailments. January 1, 1814, the Empress gave to the First Physician a bust of the King of Rome. Corvisart exercised considerable influence over this flighty woman, due to his friendship with her confident, the Duchess of Montebello, who was the daughter of his old crony, Monsieur Guehenenc and the wife of the brave Marshall Jean Lannes killed during the battle of Essling near Vienna, in 1809.

When Napoléon left Paris January 25, 1814, to fight the Allies, Marie Louise was named Regent and Corvisart continued to care for her as well as for Josephine at Malmaison. March 30 the Allies were at Paris, so Marie Louise left the capital and after a roundabout trip returned to Rambouillet where she met her father, Francis II, Emperor of Austria. In a tiny morocco leather book Corvisart noted that on April 6, 1814, the treasure chest of Marie Louise contained

5,620 francs in gold and 568 francs and 75 centimes in silver.

May 3, 1814, Corvisart, then in Bâle, Switzerland, received the following letter forwarded to him by the Empress.

> Frejus, April 28, 1814.
>
> Baron Corvisart: I have received your letter of April 22 and I have noted with pleasure your actions during the recent events when others have behaved so miserably. I am grateful to you and this confirms the opinion I had already conceived of your character. Give me the news of Marie Louise, Corvisart and do not doubt my feelings toward you. Do not give yourself up to melancholy ideas as I hope that you will live on to render service, and also for your friends.
>
> Yours,
>
> Napoléon.

According to General Gourgaud, who shared the captivity of Napoléon, he turned against Corvisart because he advised Marie Louise against joining him at Elba. Gourgaud quotes as follows: "If she (Marie Louise) had been well advised and had not had near her that low creature Montebello and that Corvisart whom I now know to be a miserable fellow, she would have accompanied me." Cabanès blames Corvisart for advising the Empress not to go with Napoléon. It appears that he gave her the opinion which she wished and so acted as her willing accomplice.

Among Corvisart's other illustrious patients we may mention Hortense de Beauharnais, Queen of Holland, the Queen of Spain, Pauline Bonaparte, Napoléon's sister and Madame Walewska, one of his best known loves. In short Corvisart attended most of the members of the imperial family and court as well. Efforts were made to supplant him but without success.

At that time, according to Cabanès, Corvisart was ill and in financial difficulty due to a business failure, being forced to dispose of his silverware and to put his country place at Colombes on the market. May 20 Corvisart left Vienna but later joined Marie Louise at Aix in Savoy where she went for the baths. August 20 of that same year he suddenly abandoned her and returned to Paris.

During the One Hundred Days between Napoléon's return to Elba and his defeat at Waterloo, Corvisart was restored to the position of First Physician. It is said that soon after the Emperor's final abdication he retired to Courbevoie near Paris. Following a slight paralytic attack in 1815 Corvisart gave up entirely the practice of medicine. He lived six years more. A final stroke on September 15, 1821, resulted in his death three days later, about four months after that of Napoléon at Saint Helena.

BIBLIOGRAPHY

1. LASSUS, J. M., Corvisart et La Cardiologie. Thèse de Paris, 1927.
2. CHEMIN, T., Corvisart et La Clinique. Thèse de Paris, 1928.
3. CABANÈS, A., Dans L'Intimité de L'Empereur. Paris, Michel, A., 1924.
4. CABANÈS, A., Au Chevet de L'Empereur. Paris, Michel, A., 1924.
5. CORVISART DES MARETS, J. N., Essai sur les maladies et les lésions du coeur et des gros vaisseaux. Ed. 3. Paris, Méquignon-Marvis, 1818.
6. HELME. La Maison de Corvisart. *Presse Med.*, 17: 657, 1909.
7. HELME. Corvisart. Médecin de Napoléon. Presse Med., 17: 689, 1909.

PUBLIC RELATIONS OF THE MEDICAL PROFESSION IN GREAT BRITAIN AND THE UNITED STATES: 1600-1870

A CHAPTER IN THE SOCIAL HISTORY OF MEDICINE

By RICHARD H. SHRYOCK, PH.D.

DURHAM, N. C.

ARTICLES in magazines, and other signs of the times in England and America," remarked a London physician recently, "are making it very clear that the public and the doctors are no longer so satisfied with each other as they used to be."[1] This implies the not uncommon opinion that in the good old days the public and the medical profession were quite content one with the other. Now nothing could be further from the truth. As a matter of fact, the relations now obtaining between them are probably more amicable than they were, say, a century ago. A brief historical study will demonstrate this, and in the process of correcting our impressions of the past, should thereby afford a more critical and optimistic perspective on the present situation.

The story is a complicated one and its narration no simple matter. To some extent, however, it resolves itself into two obvious divisions relating, respectively, to the attitude of the public towards physicians, and that of physicians towards the public. These two phases can hardly be sharply differentiated, but emphasis will be placed upon public attitudes in the first part of this paper, while professional opinion and activities will be stressed in the later sections.[2]

Certain elements which enter into the popular opinion of medicine could be illustrated in terms of almost any time and place. To go as far back as the medieval period, for instance, it is evident that severe criticism of the profession was then current among the more intelligent laity. "When one is ill," observed a thirteenth-century critic, "let him not seek the physician; avoid his paths, be careful lest he visit you; . . . He comes with haughtiness and arrogance in order to increase the trouble . . . He gathers medical books . . . to make a show of them, but not to read them. . . . He is the Reaper's agent; he is the assistant of the Angel of Death."[3]

It were hardly profitable for the present purpose, however, to enter upon an analysis of the public status of the medical profession in the Middle Ages, or even in the early modern centuries. It is trite to observe that certain influences were at work to improve that status, such as the early efforts to license "regular" practitioners. As late as the seventeenth century, however, at a time when the British North American colonies were already established, these influences had as yet brought about little change in the general standing of physicians and their science. Medical education remained a matter of didactic lecturing, based largely upon the authority of the classical texts and encumbered with medieval accumulations of astrological lore. European authorities still held that astrology was a science essential to medicine;[4] and early American practitioners, taking their cue from such counsels, watched their almanacs at times with as much care as they did their patients.

One of the troubles in enforcing

the first licensing laws lay, therefore, in the old difficulty of discovering any scientific distinction between the genuine physician and the quack. Pure medical science achieved great things in the seventeenth century, but such technical triumphs had less interest for the public than did the common practice of physic, and here little progress was made. Licensed physicians, well-intentioned but unlicensed practitioners, and the sheerest quacks, all dabbled in strange remedies, and spoke a language well-nigh unintelligible today. When reputable men were glad to pick up prescriptions from old wives or mechanics,[5] and were likely to recommend "Snayles broken from the shelles" for pneumonia, or "a small young mouse rosted" for a nervous child,[6] it was most difficult to distinguish scientist from charlatan. Indeed, a British editor has observed that even what passed in those days as the regular profession "probably numbered in its ranks more quacks than honorable men."[1] The actual efforts made to differentiate these two classes, however, are worthy of attention.

The first move to standardize the licensing of English practitioners seems to have been made in 1442, about two centuries after the advent of such laws in Sicily. The pioneer English statute announced that so many "unconnynge and unaproved" persons (females included) were "practysours in fysyk," that all who held no degree from the two universities should repair thither for examination, on penalty of punishment by the Privy Council.[8] In 1511, the licensing power was transferred to the episcopal authorities; and in 1518, with the establishment of the London College of Physicians, the power was granted to that body, so far as the territory around the capital was concerned.[9] The authority of the College was an extensive one and included the right to punish irregular practice with fine and imprisonment. It could also regulate surgery and the drug trade as well. Properly employed, such powers might have early afforded England a standardized profession and relative freedom from quackery. The professional evolution which actually ensued, however, was a curious and in some ways an unfortunate one.

The College of Physicians did proceed, during the reigns of Mary and Elizabeth, to some prosecution of quacks, but would have nothing to do with such low trades as surgery, or the drug business. These crafts thereupon went their own way, to establish such standards as they saw fit in their own fields.[10] The London College was interested only in high standards for medicine proper, and in an effort to achieve them limited its membership to graduates of Oxford and Cambridge. This brought it into conflict, especially during the eighteenth century, with the graduates of Dutch and Scotch Universities, and its prosecuting energies were consequently diverted from quacks to rival graduates. The former were permitted to thrive accordingly.

Yet even after the force of "courtesy and usage" had prevailed in favor of the Scotch graduates, their numbers, combined with the fellows, licentiates, and extra-licentiates (provincial practitioners) of the London College, were insufficient to meet the needs of the public. As late as 1750, the fellows were limited to 80 in number, and the London licentiates to about double that figure. In this situation, the masses quite naturally turned to the apothecaries for treatment. Nothing loath, the latter began a sort of "bootleg" prescription business that flourished during the seventeenth and eighteenth centuries. In vain did the College of Physicians attempt (1687) to treat the poor free, and, shortly after this, to supply them with drugs from a free "dispensary," both efforts to prevent the poaching of the apothecaries on professional preserves. The dispensary was the first of a goodly number which appeared in England and the Colonies during the eighteenth century, and hence has considerable historical significance; but it failed in its immediate purpose, languished and died. The later dispensaries tended to treat only the very poor, and the field of general practice among the masses was eventually abandoned to the apothecaries.[11]

The English public consequently became accustomed to many types of more or less "regular" practitioners, and to much bickering and rivalry between them. Fellows, licentiates, extra-licentiates, graduates of non-English universities, surgeons, barbers, apothecaries, even practicing "chemists" who encroached upon the apothecaries much as the latter once had upon the physicians, all pressed their claims upon a bewildered people. Meanwhile, quackery continued undisturbed, and its consequent growth made confusion worse confounded.

It was claimed that the apothecaries of Scotland and Ireland, like the German *apotheker* and the French *pharmacien*, stuck to their drugs and largely refrained from invading the medical field. The greatest freedom from intra-professional strife, however, was obtained in the American Colonies; inasmuch as their widely scattered population and the small number of physicians, rendered licensing restrictions impracticable prior to the later eighteenth century, and usually imposed upon all practitioners the combined duties of physician, surgeon and pharmacist. Even these were sometimes insufficient for purposes of a livelihood, and certain early American medical men functioned also as clergymen, in order to maintain themselves. Where no physicians were available the Colonies suffered a reversion to medieval procedure, in that men who were primarily priests dabbled incidentally in medicine. Yet there was little disposition to entrust the licensing function to ecclesiastical authority, perhaps because English practice already tended to favor its assignment to professional corporations. As such organizations did not appear in Colonial society prior to about 1760, it remained for the provincial assemblies to assume the licensing prerogative, and these bodies did indulge themselves occasionally in this respect. No one would accuse them, however, of exercising any real social control in the matter.[12]

It is not strange that under all the circumstances noted, the public regard for physicians had not notably risen in the seventeenth and the earlier part of the eighteenth century. The masses continued in the traditional belief, of course, that disease was something which entered into one, and that some empirical remedy could be found which would drive it out. In this respect they had great faith in medicine, but that was in no wise the equivalent of a faith in physicians. For might not anyone have stumbled upon the necessary nostrums? In a word, the masses had faith in all practitioners, quackish or otherwis.e[13] For this very reason, however, they viewed with suspicion the efforts of the regular profession to "monopolize" medical practice, either through the employment of Latin and other attempts at secrecy, or through the passage of laws limiting the right to practice.[14] The public wanted the right to go to any practitioner it desired, and was apt to view all sorts as occupying the same professional and social level. If a literary portrayal of this situation is desired, it is to be had in Shakespeare's plays, wherein no particular antimedical animosity is displayed but which include in their panorama of contemporary life few if any notable physicians.

Individual satirists, of course, ridiculed what they considered the ignorance, the greed and the futility of the medical men. The development of the printing press afforded opportunities for such attacks, which had not been available to medieval critics. The dramas of Molière and the picaresque tales of Le Sage afford the classic literary expressions of medical satire in the seventeenth century, but there was no little of the same sort of thing in England. Some of it was put in more or less readable verse, which form continued to be used in the next century. Edward Baynard, in his "Doctor's Decade," observed of medicine that:

In Ten Words the whole Art is comprised
For some of the Ten are always advised . . .
These few Evacuations
Cure all the Doctors *Patients* . . .

What more they advance,
Is all done by chance;
So as to a Cure
There's none can be sure.
Most other *Specificks*
Have no visible Effects,
But the getting of Fees,
For a Promise of Ease,
(Much like the South S . . .)[15]

To the general charges of fraud and futility some critics added the old accusation of heresy. This charge, observed an American physician in 1851, "has been brought from time to time for the past five hundred years against the profession," and had its origin in the jealousy of the priests, when their medieval medical prerogatives were gradually taken from them by the rise of a distinct medical guild.[16] Be that as it may, it is probable that the popular mind in the seventeenth century associated physicians with the rationalistic philosophers and scientists of the period, whose probing into Nature's secrets had not improved their reputation for orthodoxy. This had gone so far in France, for instance, as to make medical impiety proverbial with the public, somewhat to the distress of orthodox physicians. Despite their protests, the charge persisted and was still current in the nineteenth century, as is evident from the denials which it elicited from time to time.[17] That the same suspicions obtained in the English-speaking lands is suggested by sermons on Christianity addressed especially to physicians,[18] by John Wesley's advice to his followers to consult only the godly doctors,[19] and by the direct testimony of various English and American medical men.[20] The latter often observed, in retort, that clergymen meddled in medicine more than *they* did in religion, and were in this connection more inclined to quackery than the doctors ever were to heresy.

Despite the various criticisms aimed

at the rank and file of doctors, the later eighteenth century was an age of prosperous and fashionable practitioners in the larger European towns. Two centuries of professional organization and the fame of individual technical achievements during the same period were beginning to make some impression on the comfortable classes, who were more or less impressed on general principles by orthodox authority. A few of the most successful of the London practitioners, fellows of the exclusive College, attained an annual income of nearly one hundred thousand dollars a year, a vast sum for the time; and were able to maintain on this stipend a degree of social ostentation which has probably not been equaled in the profession since their day. Some of their fees were extraordinary. The English physician, Thomas Dimsdale, probably established a record for all time when he received fifty thousand dollars cash, an annual pension of ten thousand dollars, and a Russian baronetcy, all for vaccinating Catherine the Great and her son. Such practitioners moved in the best social circles in England, were highly praised by such literary lights as Pope and Dr. Johnson and were recognized at court.[21] The corresponding social position of such a Colonial physician as Benjamin Rush is well known.

Yet side by side with such distinction quackery continued to grow apace. And now a new form arose, the patent medicines. Their appearance is obviously associated with the advent of the newspaper and other periodicals, and their subsequent increase in number and sales corresponded roughly with the development of these essential advertising media.[22] Once the papers were available, the proprietary remedies were ready for rapid conquests, as they inherited an effective testimonial technic from the earlier quacks.[23] The growing popularity of the patent medicines indicated no increase of credulity among the masses, but simply a new means of pandering to an old and very natural appetite, the thirst for panaceas.

Nevertheless, popular addiction to these nostrums offered increasing competition to the medical profession; even though some disillusioned souls may have turned to the latter, after quackery had only increased their troubles. It was perhaps in part to meet this competition that physicians persisted in dosing with powerful drugs, and in claiming all things for their traditional therapeutic procedures. Every ill could be treated, it seemed, by the lancet, the opiate, the plaster or the purge. It is difficult to distinguish the relative responsibility for this heroic regimen of the "old school"; to some extent the public had been educated by generations of physicians to demand it.[24] Of course the relatively backward state of therapeutics, as compared, for instance, with anatomy, lay at the basis of the system. Still other factors, however, entered into the whole situation.

The peculiar position of the apothecaries in England, for instance, probably had something to do with the exaggerated employment of drugs in that country. Their control of general practice was legally recognized by the Apothecaries Act of 1815, but one curious limitation was imposed by this satute. The apothecaries were authorized to attend their patients, prescribe, and have the drugs compounded in their own shops. Because of the original view that they were druggists rather than physicians, however, they were allowed to charge nothing for advice, but only for the drugs. As a result, to quote a contemporary critic, the profession of the apothecaries "is degraded to the level of a mere trade, and encouragement is given to a reckless habit of frequent drugging and complex prescription, which increases the uncertainty of medical practice, and retards the progress of knowledge in the most backward of all departments of medical science, that which relates to the action and uses of remedies." For, obviously enough, physic came to be "ordered rather to make a long bill than a quick cure."[25] The social significance of this promiscuous drugging can be readily appreciated. Once established, moreover, such a practice was bound to be maintained as a matter of tradition and by virtue of all the influences which make for professional inertia.

In protest against this conservatism there arose, during the latter part of the eighteenth century, a very interesting popular movement, the demand for a milder medication and the abolition of the lancet. This demand, of course, was not entirely new. Various members of the profession itself had opposed venesection since classical times. Since the sixteenth century, the title: "Every Man His Own Doctor," or words to that effect, had bobbed up in one form or another in many writings against the profession;[26] and some of the chief reasons urged for self-treatment related to the pain, the danger and the futility of the bleeding and drugging regimen.

It is quite likely, also, that various current writings on personal hygiene were intended to protect their readers from the severities of medical treatment, as well as from the other dire consequences of disease. A considerable literature of health maxims and guides had been produced in medieval times;[27] and more systematic treatises followed the invention of printing, issuing from the European presses in ever increasing numbers during the sixteenth, seventeenth and eighteenth centuries. Not the least interesting of these were the poetical effusions typical of the latter period.[28] By 1800, nearly 2000 books and essays on hygiene had been printed in Europe, many of them intended for popular consumption.[29]

In addition to this hygienic advice, which did not necessarily replace that of physicians, the public began to receive more immediate medical guidance. The place of the old pamphlets urging every man to be his own doctor, began to be taken by comprehensive popular medical works,[30] whose frequent reprinting was an earnest of their popularity. Madame de Fouquet's collection of domestic remedies, published first at Dijon late in the seventeenth century, had run through a half-dozen French editions by 1710, was translated into German in 1708 and reappeared in a Spanish edition at Valencia as late as 1872. John Wesley's "Primitive Physick, or an easy and natural method of curing most diseases," went through some 30 editions in England and the United States, between 1747 and 1858. Wesley's work, like most of its type, revelled in fantastic remedies; but urged a more moderate regimen, the avoiding of too much bleeding, strong drugs, and the like. This must have appealed to those who had a wholesome fear of physic, and may have explained in some measure the book's immense popularity.

Another source of appeal lay in the fact that the popular medical manual saved the patient from the payment of fees. This aspect of the matter is suggested in the title of an American work, G. C. Gunn's "Domestic Medicine or the Poor Man's Friend," published at Louisville in 1840. This particular classic, its backers claimed, was issued in no less than 100 editions.[31] The combined medical and financial claims of these household guides were well stated in so conservative an organ as the London *Times*, which observed that "The valuable advice" contained in a certain new manual "will probably save many an appeal to a physician, and [consequently?] many a life."[32] Such a popular diffusion of medical literature may have lessened any awe, with which men had hitherto viewed the medical profession.[33]

At the same time that popular works were urging people to avoid heroic treatments and to take care of themselves at small cost, brief pamphlets, of the seventeenth-century type, continued the stream of caustic comment which had arisen in that period.[34] More thorough and scholarly critiques also began to appear. Early in the century, for instance, Feihoo published in Spain an exposition of the uncertainties of medical practice, which went through 7 Spanish editions by the middle of the century and appeared in English at London in 1751.[35] This work reviewed the whole matter of public attitudes toward medical men, analyzed the weaknesses of the science, and repeated the old indictment that "the vulgar" placed a stupid over-confidence in medicine. He declared, however, that really learned physicians were candid about their limitations, and made the counter-charge that the attitude of the public itself had much to do with the shortcomings of the faculty.[36]

Quite interesting in this connection was his quotation from a seventeenth-century French physician, Francois, to the effect that "the little Regard which the Public always pays to Observers, [and] the high Esteem, on the contrary, bestowed upon the Inventors of Systems . . . " was responsible for the elaboration of medical philosophies and the backwardness of medical science.[37] In a word, the ignorant public was held responsible for discouraging medical research along inductive lines and for perpetuating the old deductive traditions of the science. There was probably some truth in this. Certain it is, that the eighteenth century was an age of medical systems, which were based by their brilliant founders upon something of research but more of theorizing. Such was the "school" of John Brown, whose followers, the "Brunonians," extended their influence from England over the Continent, and whose practice of an unusually heroic regimen may have hastened the day of revolt against the old order.

The constant quarrels between the various medical leaders and their followers, to say nothing of the acrimonious bickerings between men even of the same "school," and the struggle in England between the different licensing authorities, became an ever more common cause of public distrust during the late eighteenth and early nineteenth centuries.[38] Feihoo, in the work noted above, devoted 10 pages to an account of the quarrels and differences between doctors, concluding with the comment: "After all these Debates, Controversies, and Revolutions, are physicians [now] agreed? Not in the least." This led him on to the apparently logical conclusion that there was no certainty or safety in medicine whatsoever.[39]

The element of fear was of course an old and persistent one in creating a popular aversion to the medical profession and, incidentally, in making for the popular approval of quackery. Professional treatment was painful and generally unpleasant, while patent medicines made medication easy. There was a well-known and well-founded horror of hospitals, such as they were at this time, and a natural dread of surgery. In addition, there was the vague fear that doctors would experiment upon their poorer patients; as well as the general suspicion that the latter, in the eyes of their physicians, were merely case materials rather than human souls. As the English physician, Dr. Lettsom, used to say of himself:

> When patients sick to me apply
> I physics, bleeds, and sweats 'em
> Then—if they choose to die,
> What's that to me—I let's 'em.[40]

Throughout the eighteenth century, these various aspects of the popular distrust of the prevailing medicine partook of a somewhat haphazard character. There was a gaining momentum of protest, but the protest was headed in no particular direction; it was obviously lacking in leaders and organization. Just about the beginning of the nineteenth century, however, several heretical systems of medicine appeared, around which much of this popular protest was to center and develop. These systems, Homeopathy, Thomsonianism, Chrono-Thermalism, and Hydropathy,[41] varied greatly in technical character; from Homeopathy, which offered another complete "system" of medicine, to Hydropathy, which seems to have involved only one of those many schemes for raising a single type of therapeutics to the level of a cure-all. Yet what is of social significance here is the fact that they all condemned the claims and the shortcomings of the "old school,"[42] and denounced especially the old routine of strong drugs and blood-letting. They came, in one sense, in answer to a growing demand for reform, and the very popularity which this assured them was destined to make them more or less effective influences in furthering such a movement.

The history of homeopathy is a relatively familiar one;[43] that of the other systems is probably less well-known. It is a temptation to elaborate upon them; but suffice it to say that the Chrono-Thermalists incorporated a medical school in Philadelphia in 1853;[44] and while the Thomsonians do not seem to have established many successful schools, they did organize state societies and wrote voluminously. Some 40 Thomsonian journals were published in the United States, where the cult had its chief home, between 1825 and 1845. Their chief *raison d'etre* was an onslaught against the use of mercury and other mineral drugs.[45] When one recalls that regular American practitioners, particularly those of the South and West, sometimes prescribed as much as an ounce of calomel at a time, and at short intervals, and that cases occurred wherein a patient actually harbored a full pound of this mercurial at his doctor's orders, the protest against mercury is readily understood.[46]

Hydropathy, with its bent for bathing, also waxed popular in England, the United States and Germany, between 1830 and 1860; but this system shaded over into ordinary quackery, which seems to have reached its very zenith during this period. Nearly every conceivable type of humbug preyed upon the people, nostrums, magnetism, messmerism, herb-doctors, "snapping-doctors," "hex-doctors," "magnetic-bath doctors," "faith-doctors," "indianopathists," astrologers, magicians, abortionists, and what you will! "Empiricism," observed a New York physician in 1845, "is everywhere rife, and was never more arrogant, and the people love to have it so. That restless agrarian spirit, that would always be leveling down, has so long kept up a hue and cry against calomel and the lancet, that the prejudices of the community are excited against it; and their confidence in the medical profession greatly impaired . . ."[47]

The patent medicine evil assumed enormous proportions as the nineteenth century advanced. More physic was taken without prescription than with it; a situation made possible, of course, by advertising. Car posters and billboards eventually increased the opportunities for publicity already afforded by the periodicals; and meanwhile, in the United States, the "medicine show" made (and still does) a popular appeal to the credulity of the masses. New York City firms were spending, as early as the forties, upwards of one hundred thousand dollars annually in advertising secret remedies.[48]

The most striking and often most common form of quack advertisement was that of contraceptives and abortion, a fact which seems hardly consistent with our traditions of Victorian propriety. The common form of such "ads" was something of this sort:

> ☞ Dr. ———'s Female Pills, one dollar a box, with full directions. Married ladies should not use them. Sent by mail.

Announcements of this type filled not only the daily and weekly papers, but the "family newspapers," and even the religious press! An analysis of one issue of a weekly New England paper in 1858, showed 28 quack ads, occupying one-half of the advertising section, and nearly one-fourth of the entire paper. Fifteen of these were addressed to those having "secret diseases" and to females; three cautioned married women not to use them "at least during the first three months of pregnancy"; while one blandly offered for only three dollars "the only safe and sure preventive from pregnancy."[49]

Some American observers believed their countrymen peculiarly addicted to panaceas and ascribed the national "wonder-gaping" complex to the newness of the country, the low status of regular medicine, and so on. They were convinced that quacks from all over the world were rushing to the American happy-hunting grounds.[50]

It is true that Americans were easily "taken in" at this period, the career of Barnum even suggests that they enjoyed it; but does anyone seriously believe that sufferers from tuberculosis relished being fooled by consumption cures? European quackery, moreover, was on all fours with the American. In 1849, for instance, there were living in London 5 men who had made at least $1,000,000 each out of quack remedies. One of them, the famous Morrison of the fictitious "London College of Health," was said to realize £80,000 annually from the sale of his purgative pills.[51] As early as 1834, the British Government was receiving an income of over £30,000 from patented medicines, a fact which may have had something to do with its reluctance to suppress or even regulate them.[52] One type of nostrum alone, the vicious "soothing syrups," sold in such quantities in England as late as the eighties as to result in the death of some 15,000 children each year.[53] Meanwhile, things were little better on the Continent. In France, laws of 1803 and 1805 had forbidden either the advertisement or the sale of patent remedies, but enforcement remained a farce.[54] In Germany, where medical legislation was usually more thorough and effective, an act of 1869 removed nearly all barriers against unlicensed practitioners; whereupon a veritable deluge of quackery descended upon a devoted Fatherland.[55] Credulity was, after all, not peculiar to Americans.

What with new medical systems arising, quackery growing apace, and popular medical manuals achieving wide distribution, the early Victorian era was inevitably a period of what one might call a popular medical ferment. It is to be remembered that it was also an age of social ferment, the period *par excellence* of reform movements, of efforts of all sorts to save the human race. Those were the days of abolitionism, temperance, communistic communities, women's rights, "Bloomerism," and other strivings for social betterment. It was most natural, therefore, that out of this whole situation there should arise a health reform movement, preaching personal hygiene, and dedicated to the proposition that all men could stay well, if they would but stay away from their doctors![56]

This movement seems to have been led in America by none other than Sylvester Graham, whose devotion to whole wheat has left him imperishable monuments in "Graham bread" and "Graham crackers." He was ably supported by Dr. William A. Alcott and by other advocates of a hygienic millenium.[57] They shared the moral enthusiasm of other idealists of the day, and indeed felt that their reform transcended them all in significance. "Physiological reform," remarked one of their journals, "is peculiarly suited to raise man from a state of sensual degradation . . . and elevate him to the rank, which as a rational and immortal being, nature intended he should occupy."[58] Meetings were held, lectures delivered, "Ladies' Physiological Reform Societies" waxed ecstatic over "physiological principles," reading rooms and hotels were established (where vegetarian rules could be observed), periodicals appeared: in short, all the ritual typical of reform movements was observed. No less than 85 popular health magazines appeared in the United States between about 1830 and 1890, and a goodly share of the earlier ones were connected directly or indirectly with the "Grahamites."[59] Popular health journals were also beginning to appear in European countries, especially after 1830, but they do not seem to have been associated with an organized movement.[60]

In the United States, the Grahamite propaganda centered in Massachusetts, and spread thence through New England and the Middle West. It represented, to some extent, a phase of the cultural expansion of New England. In the Middle West, however, the movement tended to shade over into Thomsonianism, or various other "isms," and it is difficult to draw the line between them.

It was not only the Grahamites, however, who tended to shade over into other "isms." It became increasingly difficult after about 1840, for many people to distinguish between the different medical sects and the regular profession; not only because of the rising pretensions of the sects, but also because of the falling pretensions of the regulars. It was an unfortunate fact that the period of protest against traditional medicine corresponded, both in the United States and England, with an era of declining standards in regular professional education. There had always been a few American physicians who received abroad the best training available; such men having gone successively to Leyden, Edinburgh, London and Paris, as the star of medical prestige moved from one center to another between 1600 and 1850.[61] The majority of home practitioners, however, had to be home-made; and until at least the second quarter of the nineteenth century, most of even the regular practitioners received their training entirely with a "preceptor." The early American medical schools represented a desirable movement to improve upon such training; and by about 1840, the better of these schools required at least a nine months term of "lectures," and as much as two years' practice under a preceptor, for a doctor's degree.

Up to this time, most complaints about inadequate medical training can probably be ascribed to rising standards, rather than to falling performance. After this, however, the relatively old medical schools began to experience increasing competition from a growing crop of new "colleges," whose interest in fees apparently led them to shorten their courses and to otherwise cheapen their degree. One can now see that this was almost inevitable, since in a country growing so rapidly in both territory and population as was the United States at this time, there was bound to be an increasing demand for physicians. They must be turned out quickly and in large numbers and the old schools could not always supply them. The very reputation which these better colleges had given the profession, moreover, tempted mediocre men to seek a short cut to its prestige. A somewhat analogous development in England, characterized by the intrusion of poorly trained apothecaries into general practice, has already been described.[62]

It was quite natural, under these circumstances, that the public should become as suspicious of certain types of physicians as it was of their physic. Criticism was aimed in some cases at the medical schools and, on other occasions, at their students. In 1858, for instance, violent attacks on the latter were made by the press of Philadelphia, which city was then the chief training center in the United States. One editor declared that the young "medics" were crude, coarse, and ignorant; and that they were consequently despised by the better people of the city. After an inadequate education, he continued, they went forth to contribute to the "poisoning and surgical butchery [which] have already been committed in thousands of instances."[63] While this picture of the students has all the appearance of being over-drawn, in view of the fact that the Philadelphia schools attracted many of the best men, it nevertheless indicates that there was some feeling against them. That this was well grounded at times, is suggested by the fact that when the University of Pennsylvania arranged to raise its requirements by extending its medical course, the students were reported to be leaving for "easier quarters."[64]

One thing is certain. Such was the popular ferment in the United States by 1840, such was the growing protest against both physicians and their physic, that the regular profession faced a serious crisis involving its entire status in society. Open attacks began to appear sporadically in the public press. Various charges besides the principal protests already noted were made, some of them not unknown to preceding centuries. A New York State paper claimed that the doctors tried to keep their patients ill.[65] In New York City a citizen died after treatment by a specialist, whereupon *Harper's Weekly* carried long accounts and imaginary drawings illustrating the case;[66] and one of the large dailies waxed so indignant over it as to declare the entire medical guild "a stupendous humbug."[67] There were persistent charges, not only that the standards of medical training were low, but that there was still nearly as much quackery within the profession as without; and that, in general, all the arts and sciences were making progress except medicine, the most vital of them all.[68] The lay editor of a health journal delivered what amounted to a final ultimatum, when he announced that public opinion had been slow to deal with physicians, but was at last ready "to rend the seeming adamant of medical conservatism."[69]

Public distrust began to express itself in action, as well as in words. The homeopaths were probably correct in the assertion that, by 1860, people would "no longer submit to over-medication," or at least not to the same degree as heretofor.[70] Under the stress of epidemics men at times openly rebelled, and physicians who persisted in the use of traditional measures were subjected to personal abuse. When, for instance, Savannah was terrorized by yellow fever in 1854, a local doctor announced a new and easy remedy, which was immediately in great demand . . . "the multitude stood expectant at the drug stores," wrote a leading practitioner, "each man awaiting his or her [sic] turn to have his vial filled with the great 'Preventative & Cure.' The wiseacres abused me at the corners of the streets, (I'll assure you this was literaly the fact) for being old fashioned & prejudiced, and for killing all my patients with the Lancet and Calomel."[71]

The logical extreme of the popular opposition to mercury was attained in efforts to prohibit its use by law. Thus the citizens of Westmoreland County, Pennsylvania, petitioned their Legislature in 1845, to forbid the employment of mercury for medicinal purposes. A special Committee of that body considered the petition, and denied it on the ground that mercury was dangerous only if abused. If all such *potentially* dangerous remedies were to be prohibited, they added, the Legislature might as well abolish the whole medical profession. The Committee, however, did not condemn the interesting principle involved in the peition; viz. that laymen might legislate on *materia medica.*[72]

It was apparent that many men did not credit physicians with any peculiar knowledge of their craft; and it was quite natural that such laymen should feel capable of a little practicing on their own account. The family medical manuals presumably encouraged this; indeed it was inevitable in remote regions not served by physicians. An able American observer declared that most of the more ignorant laity believed themselves capable of practicing on anyone and every one; and were ready to pass upon the merits of all the local medical men in the bargain. The only limitation that such philosophers encountered was that "in attempting to proselyte their neighbors, they in turn [were] found equally qualified and just as successful, though . . . by a very opposite system of medicine."[73]

Laymen were occasionally so bold as to lecture the profession on its own subject-matter. In the late sixties, *e.g.*, St. Louis editors declared the doctors were mistaken in thinking the Mississippi water at St. Louis unsafe for drinking; a Nashville editor accused the "medicos" of knowing no remedy for sun-stroke, and proceeded to give one of his own, and so on.[74] On both sides of the Atlantic laymen suspected physicians of carelessness in certifying the death of their patients, without exhaustive tests; and a morbid fear of premature burial was not uncommon in this period.[75]

Equally morbid was the ancient popular aversion to dissection. The horrors of the anatomy room, more horrible to the lay visitor than the hardened anatomist was apt to realize, seemed an offence to both God and man. Occasional dissections had been authorized, first in Italy and later in northern Europe, since late medieval times; but the earliest recorded cases in the English Colonies came only with the eighteenth century and public opinion in English-speaking countries had not yet reconciled itself to the practice at the end of that period. A similar feeling sometimes obtained against post-mortem examinations for diagnostic purposes.[76] The pleasant custom of "body snatching," to which physicians resorted in a search for "subjects," naturally offended the public; and was occasionally the cause of considerable commotion.[77] Legal prohibition of dissection put a premium, not only upon body-snatching, but even upon murder. The whole situation became acute at the time of the "Burking" murders in Edinburgh (1828), when 16 persons were successively done away with, and their bodies turned over to Dr. Robert Knox, for class-room purposes.[78] A similar crime occurred in the United States at about the same time. As a result of the ensuing public outcry, and the consequent efforts of the State Medical Society, the Massachusetts Assembly passed an anatomy act in 1831, authorizing the granting of bodies to medical schools under decent legal restrictions.[79] The British Parliament adopted a similar law the following year. Not until after 1850, however, did most of the other American states begin to follow suit.

The laymen's horror of dissection represented, in a way, the persistent feeling that doctors delved into unholy and forbidden things, and that sinful, or at least dangerous practices, were the fruit thereof. This fear also expressed itself during the nineteenth century in the well-known opposition of certain lay groups to vaccination, vivisection, and to serum therapy in general. The opposition to vaccination (and to inoculation before it) was of a serious character, and obviously has not entirely ceased at the present time.[80] The antivivisection movement naturally developed with the coincidence of the first reform movements for the prevention of cruelty to animals, and the advent of more or less systematic experimentation upon them by physicians.[81] Organized antivivisection societies, however, did not appear until late in the century. Vivisection probably aroused more genuine horror among certain sensitive laymen, then did any other aspect of medical work. An almost forgotten, extreme expression of such feeling is to be found in H. G. Wells' gruesome fantasy, "The Island of Dr. Moreau."[82]

In the course of the body-snatching and vaccination controversies, it seemed to many people that the interests of the medical profession as a whole were opposed to the best interests of society. A similar feeling was engendered by the profession's attacks upon quackery, justifiable as these attacks may now seem to us. The seventeenth century feeling that one practitioner was "as good as t'other" was still all too common two centuries later; and those who harbored it saw in medical denunciation of patent nostrums merely so much professional jealousy. "Cordials" and "Catholicons" might do a man more good than "blue mass," yet the doctors wanted, so it seemed, to drive off these competitors, rather than to let them aid society at the physicians' expense.[83]

That physicians who condemned quacks might have the public interest at heart, as well as their own, seemed beyond the comprehension of many. In like manner, the organization of the first state medical societies was viewed in America as a purely selfish professional move; although one of the prime purposes of such organizations was to make possible a clear distinction between regular and irregular practitioners.[84] Indeed, so suspicious did laymen become that even the first professional efforts made to secure a much-needed registration of vital statistics, were viewed by American politicians as "tricks of the doctors" to increase their trade.[85]

Such suspicions of medical motives had serious consequences. They were a factor in the long delay of vital statistics legislation in the United States; and they tended, on both sides of the Atlantic, to prevent adequate legal control of medical practice. The confusion obtaining in England by 1815, with regard to medical licensing, has been described. It was so great that, according to one good authority, anyone could assume the title of "doctor" or "surgeon" in England, and practice with impunity.[86] No legislation to bring order out of this chaos was secured prior to the Medical Act of 1858. This statute provided for a national *Medical Register*, as a means of clear distinction between regular and irregular practioners, and established a central Council to administer the same.[87]

It has already been noted that early conditions in America made licensing restrictions impracticable there until late in the eighteenth century. The pioneer provincial and state licensing laws were elicited by the abuses of quackery amidst a growing population, and by a rising standard of professional training; somewhat as the first English medical statutes had been called forth by similar phenomena. The earliest American legislation also resembled the first passed in the mother-country, in that it restricted all practice to regularly qualified physicians, apparently in the same innocent belief once obtaining in England; *viz.* that quackery could be easily suppressed by statute. Between 1760 and 1830, the pioneer American laws against irregular practice tended to become more severe.[88] The power to license was at first assigned to state government boards, which were in some cases entirely composed of laymen. There was a tendency, however, as the first state medical societies began to be organized, to follow the British example by transferring the licensing authority to these professional bodies, or to the new medical colleges arising in the same period. Such trends suggested a seemly respect for the regular profession.

With the rapid development after 1830 of rival medical systems, popular health movements and quackery on the one hand, and the decline of educational standards in regular medicine on the other, the scene changed. One by one the states began to abandon their restrictions against irregular practice. In the forties, Alabama exempted Thomsonian practitioners from all penalties; Georgia proceeded to license Thomsonians by special act of the Assembly, a reversion to Colonial procedure;[89] Connecticut withdrew exclusive control from the State Medical Society; New York abandoned all restrictions, except those against "gross ignorance" and "mal-practice;" while Louisiana simply gave up all attempts to enforce its medical legislation. By 1845, the situation was just this. Eight states had never enacted licensing legislation. Ten states had repealed their licensing restrictions; and in only three was there even a pretense at such legislation.[90]

This abandonment of restrictions on practice was doubtless in part the result of experience: the irregular practitioner could no more be suppressed in the United States than he could be in Great Britain. Indeed, Mississippi had the reputation of being the only state in which the laws ever had been enforced. Yet lax enforcement would not in itself have necessarily led to repeal. As a matter of fact, a conscious repeal propaganda was addressed to the legislatures and proved more effective than medical counter-propaganda.[91] The New York Assembly for instance, was subjected to ten years of pressure before it weakened, and abandoned its licensing laws in 1844.[92]

It is perhaps significant that this antimedical movement coincided with a great democratic movement in American politics and society, with what historians are pleased to call "the rise of the common man." It is the general opinion that a less cultivated type of politician was coming into control of the state assemblies, and it may be that such a type had relatively little esteem for the status of any educated profession. The American masses whom he directly represented were, moreover, impatient of all restriction, and were doubtless anxious to maintain their "liberty" in medical as well as in other matters. State Senator Scott, who introduced the repeal bill of '44 at Albany, declared in its favor that: "A people accustomed to govern themselves, and boasting of their intelligence, are impatient of restraint. They want no protection but freedom of inquiry and freedom of action."[93] Thus did the democratic American of the forties declare his inalienable rights to life, liberty and quackery.

Finally, it is to be remembered that even the educated classes in this age had been converted, since the late eighteenth century, to the general philosophy of *laissez faire*. It was the spirit of the times to throw all fields of business and professional endeavor open to unrestricted competition—why not medicine among the rest? Governments should largely restrict their domestic operations to the use of the police power. True, a system of medical-police, including licensing laws, had been well developed in the German states since the middle of the preceding century. English-speaking lands, however, did not share this view of things. It was foreign to their individualistic *weltanschauung* to think of medical licensing as an integral part of the police power.[94] Hence medicine, with all other human activities, must take its chances in the grand competitive scramble characteristic of the age.

It were well to pause here, to caution against exaggeration. So much evidence of the public distrust of physicians has been noted that it were easy to forget the considerable degree of public confidence which persisted even through the most sceptical decades. Many good people were of course devoted to their doctors; indeed the "family doctor" of Victorian days is now looked back to as one who enjoyed almost ideal relations with his public.[95] Devoted patients, however, were not usually so articulate a class as the reformers, hence the ease with which the former may be forgotten. It is often only in their correspondence, yellow and hidden these many years, that we get a glimpse of their attitudes. Here, and this sample is taken at random, is what Miss Virginia Jefferson Randolph, granddaughter of Thomas Jefferson, had to say on the subject in 1822: "We have had a rather sick family lately, . . . and I am on Dr. Watkins' list. He has bled me twice, and prescribed a course of calomel, which I am getting safely through . . . and I expect soon to be perfectly restored. You must not expect . . . that my health is worse than it frequently is in summer, but Dr. Watkins wishes to make a permanent cure at once of all my complaints . . . I have no doubt but that his advice is most judicious . . . "[96]

In speaking of such confiding persons, a British physician observed a few years later that there were still those in England:

> "who believe in the orthodox practitioners, who have faith in the Royal College of Physicians and Surgeons . . . who call things by old names, . . . respect fervently leeches, blisters, black draughts, blue pills, . . . send for their doctors just as soon as they are ill, do just exactly as they are bid, inquire simply whether the liver is affected or the head, and are satisfied with what they term his pronouncings . . . They respect most highly someone who knows their constitution, and who knew their father's . . . They believe in bile and bilious attacks; and, giving themselves up to the man who brought them into the world, or sent their fathers out, they are bothered with no doubts, and are content to be killed or cured in the approved and orthodox old way."[97]

Throughout this whole period, despite public scepticism, society continued to observe certain formal distinctions which were entirely creditable to the medical profession. Hospital staffs were almost always made up of regular physicians or, in some cases, by homeopaths. Medical missionaries were usually drawn from the regular profession. Public honors continued to come to some physicians; as, for instance, to the 36 British doctors who were knighted between 1850 and 1883, and the 16 who were granted baronetcies during the same period.[98]

There were, too, some open expressions of public confidence in medicine, which appeared by way of counter propaganda to the campaign of disapproval. "As an intellectual and thus a very useful class of the community," observed the editor of a Boston religious journal in 1831, "the medical men are entitled to high respect and esteem—they are invaluable, generous, likeable and disinterested. They are . . . eminently entitled to the confidence of their fellow men."[99] The very emphasis placed upon these statements, however, smacks of admonition and suggests the reproval of philistines.

Returning, now, to the general theme of professional competition in a *laissez faire* medical world, it is logical to raise certain questions. How did the regular profession fare in this free-for-all? How did it meet its critics and how did it deal with its competitors? Did it sense the uncertainties of its situation, and, if so, what steps were taken to improve the same?

In the first place, there is no question that the profession was conscious of its troubles, and was convinced that they were going from bad to worse. "The Present Position of the Medical Profession"[100] was a common theme in medical literature about 1830. After some years of professional soul-searching, it reappeared under such pessimistic captions as: "To What Cause are We to Attribute the Diminished Respectability of the Medical Profession in the Estimation of the American Public?"[101] What most concerned the regular school was, naturally enough, the growth of rival systems and quackery; particularly the public patronage and legal protection of the same.

Other indications of a lack of public appreciation, however, were noted by medical men. Great physicians, they claimed, were not rewarded as were prominent politicians; though the former sometimes risked their lives in public service, while the latter rarely risked more than patronage or power.[102] (It is a curious fact that about 1855, two important American leaders were blessed with the same name; *i.e.*, Alexander H. Stephens. Yet who has heard of *Doctor* Alexander H. Stephens, of New York?) True, some statues were raised to Esculapians. Lists of the same were eventually drawn up in both Europe and America, but, comparatively speaking, are not particularly impressive.[103]

Philanthropists gave much to churches and something to schools, but passed by on the other side of hospitals and medical colleges.[104] Special governmental grants to these latter institutions were "almost unknown" in the United States until after 1850. American authorities appropriated much for internal improvements relating to transportation, but gave little for the "internal improvement" of their own citizens!

Dr. Paul Eve noted that, in 1849, there were a thousand churches standing in Georgia and but one medical college![105] One might add that the hospitals in that State could have been counted on the fingers of one hand, and that this condition was more or less characteristic of many parts of the country.

At least one interesting exception to the indifference of governments to public medical service, however, is to be found in a case of early support of medical education for women. Now the regular profession had been strongly opposed to "female doctors," although one American medical journal carried contributions on pathology from a French woman as early as 1831,[106] and other journals occasionally published sympathetic articles.[107] The lay press, on the other hand, was generally friendly in its comments upon the first feminine aspirants for the M.D.;[108] and at least one American state, namely, Massachusetts, "contributed liberally" during the sixties to the establishment of a "female medical college." This, moreover, was after the same State had consistently refused to do anything for mere masculine institutions.[109]

Not only did public leaders fail to support the medical profession properly, but they were even inclined to aid the enemy. Prominent clergy were accused of giving such regular approval to quack remedies that the public had come to expect clerical recommendations; a vestige of which tradition seems to survive today in such an appelation as "Father John's Medicine." In England, both bishops and lay lords could be persuaded to grace the latest elixir with their personal endorsements.[110]

The few medical men in public employment, claimed the physicians, were shabbily treated by the authorities. The low pay of English "poor-law doctors" was notorious. Physicians in the United States Army Medical and Marine Hospital services were inadequately rewarded in both rank and salary.[111] During this country's war with Mexico, for instance, every regular army officer was promoted, except the medical men, of whom *not one* was advanced.[112] Even when governments did honor medical service, the reward was usually small in comparison with that often given for other types of service.[113]

There was also a growing feeling in medical circles that the public was unfair to the regular profession, even when it did patronize it. Much of such feeling, no doubt, indicated simply that the profession was coming to expect more, rather than that it was actually receiving less appreciation. Some grievances, however, may be noted in passing. It was felt that too much wisdom was demanded of the practitioner, and that he was almost forced by some patients to assume omniscience—whereupon he was criticised by others for being over-certain and pretentious. Individual mistakes, by any sort of practitioner, were blamed on the profession as a whole.[114] Personal risks and sacrifices, often made in behalf of the poorest classes in the community, were unappreciated.[115] Even the prosperous were inclined to parsimony in their medical relations, and while they might give liberally to their pastors and lawyers, were apt to forget their medical advisers. The case of J. E. Thayer, of Boston, who bequeathed $20,000 to his family doctor, was noted as a very unusual one.[116]

When laymen insinuated that physicians liked to keep patients ill, in order to pile up bills, the doctors retorted that this was the only condition in which said patients ever would pay a bill anyway! So soon as laymen recovered, they lost all interest in rewarding the physician. In France, the profession cherished an ironic proverb, to the effect that: "mal passé n'est que songe."[117] At best, the doctor's bill was always the last to be paid. There was probably no complaint so chronic in the profession as this one relating to unpaid fees.

On the other hand, there was less public protest against excessive fees than is common today. Such current phrases as "the high cost of medical care," or "the high cost of being born," etc., were then unknown. If certain classes could not afford medical attention or, in remote rural regions, could not secure it, they do not seem to have been so vocal about it as is customary at present. Perhaps this simply means their standards were lower in those days, they had their manuals and their midwives, and expected nothing better. It is, however, a truism that a physician's investment in training and equipment was then relatively low, and this probably made moderate charges the rule. Any attempt at estimating average costs, however, would have to be preceded by careful study.[118]

The profession does not seem to have worried particularly about its financial relations to society, beyond the demand for fair payment of fees. There was little if any talk of "socialized medicine", although there was some dabbling in "contract medicine" on both sides of the Atlantic. A physician would undertake to care for an entire family during a year, for a sum set in advance, sometimes as low as five dollars a year.[119] The system was used to some extent in the South, for the care of plantation slaves, although the ordinary scheme of specific charges was also employed in this connection.[120] Young doctors were tempted to adopt the contract relationship despite its condemnation by professional leaders, because it offered a certain, if rather small, revenue. It is to be remembered that such salaried opportunities for young "medicos" as are now available in various institutions, were then largely lacking. Only in the routine care of large slave groups in the South, were analogous opportunities available; and here the young Southern practitioner had an advantage over his Northern brother, which partly compensated for the former's professional isolation.[121]

That the protest against non-payment of fees was no idle one, is indicated by the difficult financial situation of many physicians. Even a very successful practitioner wrote in 1839: "The longer I practice the more I feel determined to go hereafter for the 'quid pro quo'! It runs me almost crazy to think that with hundreds upon hundreds due me professionally I find the greatest difficulty in raising a simple fifty dollars."[122] Meanwhile the physician with only an average practice was sometimes in even more difficult circumstances. As late as the end of the century, 75 out of a certain group of 100 American medical graduates turned to non-medical work within five years after graduation, in order to seek a better income. The financial status of the average European physician was even lower. One half of the physicians of Berlin, in 1895, received an income of less than three thousand marks; and that of their Austrian brethren was even lower.[123]

The "faculty" occasionally lectured the laity upon other matters besides fees. In the heyday of early Victorianism, for instance, American physicians were much given to charging the supposedly prim public with immorality. The increasing resort to contraceptives and abortion, the doctors claimed, was attaining the proportions of a national scandal. In the good old days such things had been unheard of, but now (1850) they were common even among the "genteel" and the church-going. Thus spoke presumably well-informed practitioners, some generations before the automobile or moving-pictures could be glibly cited as the peculiar causes of a peculiar decadence![124]

Medical men admitted, however, that the public was sinned against, as well as sinning. The tendency, increasing as the century advanced, to specialize, reacted unfavorably upon the reputation of the general practitioner and contributed to the decline of the much lamented "family doctor."[125] The standards of medical training were indeed low, progressive physicians admitted, and heroic treatment did indeed admit of some modification. It was with regard to these matters of education and therapeutics that "the faculty" began to take the most energetic steps, in order to improve its public status. The first efforts made by the American profession to raise national educational standards came in the thirties, and finally flowered in the forties with the organization of the American Medical Association. A prime purpose of this society was the improvement of medical education, though it achieved little along this line in the antebellum period. It also gave its attention to improving the quality of medical literature, in a day when a growing number of inferior periodicals produced a "cackle as of Babel"; and when, as Oliver Wendell Holmes put it, most American writing consisted simply of "putting British portraits of disease into American frames."[126]

As a matter of fact, this was the period when American medicine was first consciously striving for cultural independence of European influences. This effort may be attributed in part to the patriotic spirit of the times, which inspired even scientific men upon occasion, and in part to those efforts at improvement which were normal in a relatively new and growing country. American physicians knew that cultural independence could be obtained only when these improvements included the establishment of American medical schools, in no wise inferior to those abroad. This final stage in what has been termed the "transit of civilization"[127] was not attained in American medicine, however, in the period under consideration. Indeed, the average medical training given in this country continued to be of a relatively inferior character during the two decades that followed the Civil War.[128]

During this period, therefore, leading physicians continued to be much discouraged by the training situation. Things seemed to be going from bad to worse. A Georgia physician wrote, in 1857:

> "We have taken the first bold, unequivocal stand against a growing abuse, viz., taking a winter student, hurrying him through a summer course, & turning him out a Doctor in less than a year . . . This has been done by Oglethorpe College

here . . . The Atlanta College avows and defends this course . . . When schools can act in this way & Professors in open Association talk as some talked, are we not falling upon evil days? As God is my judge I speak for the Profession at large & not for our College."[129]

In desperation some reformers, perhaps inspired by British discussions, advocated federal licensing laws.[130] Others urged the entire abandonment of the apparently discredited M.D. degree, and the substitution of a more exclusive one; *viz.* "M.A.M.A." (Member, American Medical Association).[131]

Meanwhile, European medical schools tended to maintain high standards, the general cultural traditions of western Europe favoring the same. French and German universities, by the middle of the nineteenth century, usually required at least a three-year training period.[132] French schools had then a particularly good reputation, and the French profession seems to have held a relatively high social status. The medical degrees of certain of the German universities, however, had a poor reputation[133] and German physicians sometimes complained that the public thought it was easy to enter the medical profession.[134] In the earlier part of the century, at least, there was considerable complaint in German medical circles, of a lack of popular appreciation of the profession.[135]

The standards of most of the regular British licensing authorities were, during the first-half of the nineteenth century, fairly high. Yet there was considerable variation and consequent confusion, what with 16 independent licensing bodies operating by 1845,[136] and some 21 by 1858.[137] The London Society of Apothecaries, which licensed a large part of the general practitioners in England, required its apprentices to spend the greater part of their term of service in their masters' drug shops. The Irish and Scotch authorities did not have to worry about poorly trained apothecaries; but, in Scotland, the University of St. Andrews was said to give the degree to all who experienced difficulty in securing it elsewhere.[138]

It was quite evident that all was not what it should be in Great Britain, and professional leaders began agitating for national statutory regulation. Individual protests in the thirties, and the activities of the British Medical Association (founded 1832), led to the submission of parliamentary bills in the forties. Sir James Graham, as Home Secretary, attempted to secure the passage of a comprehensive medical act in 1845; and while this failed, it led to a considerable public discussion.[139] Finally, a Medical Act was adopted in 1858, already noted in connection with the *Medical Register*, in which a national Medical Council was given authority to impeach licensing bodies before the Privy Council, in case low educational requirements seemed to justify such action.[140] Thus Great Britain, unhampered by such a federal system as made national action impossible in the United States, took an important step toward creating standards in medical training.

Equally significant with educational reform, was the concomitant effort to reform traditional treatments in medical practice, a move that was world-wide in scope. Regular physicians began, in increasing numbers after about 1850, to condemn the routine use of calomel and to counsel moderation in blood-letting.[141] This may doubtless be traced in part to the more critical methods employed in therapeutics in the European medical schools after *ca.* 1830; notably at Paris, whence such critical attitudes were carried to America by returning students. It would seem an almost unavoidable conclusion, however, that much of the milder medication came gradually into vogue in response to the growing popular demand.

There was conservative resistance to be sure. Older men, particularly, resented the criticism of their therapeutic stand-bys, and continued to bleed and blister as late as the seventies.[142] Their very resistance, however, increased the popularity of homeopathy, and, in the long run, shortened the days of so-called "allopathy."[143] Thus the combined influence of critical medical scientists and an outraged public, at last established a saner and more merciful regimen. This achievement alone must have encouraged a *rapprochement* between the public and the profession.

It is hardly necessary, in listing the means taken to improve the public status of the profession, to observe that regular physicians condemned quackery whenever they could secure a hearing. Sporadic efforts were made to educate the public against it, although more energy was probably expended in the fruitless effort to secure legislation suppressing it outright. In 1839, for instance, Dr. Caleb Ticknor published at London his "Exposition of Quackery and Imposition in Medicine," in which he warned against quack remedies peculiar to the various types of disease, in a manner somewhat suggestive of the later publications of the British and American Medical Associations on the subject.

Rival medical systems were denounced in terms as abusive as those heaped upon the quacks,[144] although the first reactions to homepathy had not been entirely unfriendly;[145] and, even after the schism between the two schools, the advent of some slight appreciation of Hahnemann's followers can be observed as early as the fifties.[146]

Another move taken by the profession to insure better relations with the public, as well as to promote internal harmony and other professional interests, was the adoption of ethical codes. Percival's English code was published in 1803, and those accepted by American local and state societies tended to pattern after it, often without due acknowledgements. That adopted by the American Medical Association, upon its formation in 1847, avowedly followed the English authority.[147]

Last, but not least, socially-minded medical men began to agitate the problem of the public health, and to urge governments to employ medical science for the public good. The much abused physicians might yet prove the salvation of society! Such individuals as the English physician, John Ferriar, had sounded this note before the end of the eighteenth century.[148] The growth of urban slums, accompanied by rising mortality rates in both Great Britain and the United States,[149] rendered the need for sanitary reform acute, and physicians naturally led in the response to this situation. Local medical societies were usually responsible for the first establishment, after *ca.* 1790, of local boards of health in the English-speaking countries. In Great Britain, such leaders as Southwood Smith and John Simon coöperated with the layman Edwin

Chadwick, in the early public health movement.[150]

In the United States, such physicians as Jewell of Philadelphia, Harris of New York and Arnold of Savannah, led a public health movement which culminated, before the Civil War, in the organization of a now almost forgotten, national public health association.[151] Such socially-minded medical men had good cause for grievance against an ignorant public, often indifferent to its own best interests. In the long run, however, their work may have been a factor in promoting public appreciation of the profession, a fact perhaps not always realized by those physicians who have remained relatively indifferent to preventive medicine.[152]

This was possible, of course, because public hygiene, as well as other phases of medicine, made unprecedented progress in the period following 1870. The advent of this progress was apparent earlier in the century, to be sure. The revolution in method which made it possible had, indeed, already been achieved by 1850, at the very time when criticism of medicine as a backward art was most outspoken! Worthington Hooker pointed this out most effectively when, in 1852, he accepted the chair of theory and practice at Yale University. Since Bacon's time, he observed, the growing emphasis upon inductive method had found expression in the physical sciences, rather than in medicine; partly because the latter was more complicated and must at times wait upon progress in these "simpler sciences" before its own advances could be attempted. Hence medicine had continued during the eighteenth century, medieval-like, to be dominated by ancient authorities and mere theorizing, long after physics had achieved a systematic inductive basis. But now, proclaimed Hooker:

> "the position of our profession, in relation to theories is very gratifying . . . The dominion of the theorizing spirit, which has so much retarded our science heretofore, has during the last-half century been passing away, and the spirit of a strict philosophical observation has been gaining more and more control over the medical mind . . . Actual knowledge is now more rapidly accumulated than at any previous time . . . For the first time in the history of medicine, the medical world is destitute of a dominant theory. It is a glorious era in our science."[153]

True as this was, it was natural that the achievement of outstanding results would follow only after some decades of scientific toil. Meanwhile, during this lull between the revolution in medical method and the consequent revolution in results, the profession seemed to fall to its lowest level in the estimation of the public. It was after 1870 that rapid scientific progress seemed to set in, when "medical discoveries" that the public could appreciate began to be announced. Bacteriology, antiseptic surgery, the routine use of anesthetics, vaccines, serums, all "the triumphs of modern medicine" seemed to follow one another in rapid succession. Sooner or later, the public was bound to appreciate the fact that an old art had metamorphosed itself into a modern science.

It would appear from this that the medical profession was a lucky one, after all, despite its legitimate grievances. What could have been more fortunate than to have the period of greatest scientific progress set in just when professional stock was apparently most below par? Second thought will suggest, however, that luck had as little to do with this as with any other historical phenomenon. In the first place, critical research work was, in effect, the profession's most pertinent answer to popular criticism. In the second place, it is probable that research was itself the product of the same forces that made for attack; that is, both expressed the relatively critical spirit of the times. The same *Zeitgeist* which inspired the criticism of medicine, also inspired the work which was destined to answer that criticism.

No physician need be told, to be sure, that the profession's troubles are not yet over. Individual relations with the laity are not yet perfect, average professional incomes are not what they should be, and quackery persists. Homeopathy is now recognized by some of the ablest minds in the "dominant school" as sharing with the latter its status as "the regular profession;"[154] but Thomsonianism and Hydropathy have disappeared, only to be replaced by Osteopathy and Chiropractic, to say nothing of various forms of religious healing. Yet few doubt that, on the whole, quacks and irregular practitioners face a more formidable opposition than they did seventy-five years ago. The medical profession is more strongly entrenched in scientific equipment and, as a result of this, in public esteem. Perhaps the best evidence of this fact is to be found in the gradual disappearance of that extreme pessimism, with which physicians themselves viewed their public relations in the earlier period.[155]

In like manner, of course, no well-informed laymen need be told that the public's troubles with the medical profession are not yet a thing of the past. Some of the very advances made in modern medicine seemed to carry with them results which were unfortunate from the lay point of view. Surgery having become relatively safe and easy, some surgeons were tempted to indulge in an excessive number of operations; and the old public dread of unnecessary drugging was in part replaced by a new dread of unnecessary cutting. Again, the development of the efficient modern specialist has encouraged an extremely impersonal attitude towards patients, which the latter sometimes resent.

More serious is the obvious fact that scientific progress has necessitated increased financial investment in medical training and equipment, and this expense must in some way be passed on by physicians to the consuming public. Hence the more efficient the medical profession has become, the more expensive its services; and the more the people have trusted and therefore desired medical aid, the less they have been able to afford it.[156] The very progress which solved the scientific difficulties between the public and the physicians, has thus inevitably created a new issue . . . the question of medical costs.[157] This is the problem *par excellence* in the present public relations of the profession.

REFERENCES

1. CROOKSHANK, F. G. The Doctors and the public, *Forum*, 82: 22, 1929.
2. One word of caution is in order, as to the sources which can be employed in surveying the present subject. It has been customary with popular writers to depend largely upon the opinion of literary men, as expressed directly in

essays upon the medical profession, or indirectly in the portraits of physicians to be found in fiction. These are legitimate sources, to the extent that this or that author is realistic, or reflects a common opinion; but they need to be used with more caution than is customary, and should be supplemented by the less obvious but sometimes more significant evidence available in legal codes, medical literature and popular periodicals.

3. FRIEDENWALD, H. The Physician's Aphorisms: A Medieval Hebrew Satire, *Johns Hopkins Hosp. Bull.*, 29: 68–70, 1918.
4. "L'astrologie, qui est une science necessaire pour l'exercice de la Médecine." Lussauld (Conseiller & Médecin ordinaire du Roy.) Apologie pour Les Médecins, Paris, 1663, p. 138.
5. It is only fair to remember, of course, that a few of the most effective drugs actually were the products of folk medicine. The border land between folk medicine, regular medicine and botany, was cultivated by the herbalists. See especially Rohde, E. S. The Old English Herbals. Lond., 1922, Chap. 5, 6.
6. LANGFORD, J. A. How Our Fathers Were Physicked. In Andrews, W. The Doctor in History, Literature, Folklore, etc. Lond., 1896, p. 221.
7. *Lancet*, p. 393, 1918.
8. Medical reform, *Edinburgh Rev.*, 81: 237, 1845.
9. SIR JOHN SIMON, (English Sanitary Institutions, p. 65), believed the act of 1511 to be the earliest of the realm.
10. The incorporated craft of London surgeons was, as is well known, merged with the barbers (1540); but was eventually established (1740) as the independent London College of Surgeons, with power to suppress surgical quackery. Such power was rarely used, and seems to have been largely unnecessary. Similar institutions were established in Edinburgh and Dublin. The London apothecaries were united with the grocers (1606), and separately incorporated as the Apothecaries Society (1615).
11. The data given above concerning the evolution of the English medical profession is largely based upon two able articles *viz.* Medical reform, *Edinburgh Rev.* 81: 237 ff., 1845; and Medical practice throughout the United Kingdom, *Dublin Rev.*, 18: 174–204, 1845.
12. A prominent provincial doctor, e. g., was so licensed in 1686, *after* he had been practicing successfully for some years; *Conn. Colonial Records*, 3: 218. See STEINER, W. R., The Reverend Gershom Bulkeley, of Connecticut; An Eminent Clerical Physician. *Johns Hopkins Hosp., Bull.* 17: 48 ff., 1906. Interesting sketches of medical conditions in the American colonies, during the seventeenth century, are given in WERTENBAKER, T. J. The First Americans, chap. 7; in KRAUS, M. Intercolonial Aspects of the Revolution, etc., N. Y., 1928, chap. 7; and in several histories of medicine in particular provinces, *e.g.*, WALSH, J. J. History of Medicine in New York N. Y., 1919, 1: 15–75; GREEN, S. A. History of Medicine in Massachusetts. Boston, 1881, pp. 6–85.
13. A London pamphlet of 1739, has the suggestive title: One Physician is e'en just as good as t'other . . . Apothecaries are as good as any, if not the best of all. A most interesting account of a famous seventeenth century quack, is to be had in VALENTINE GREATRAK'S Strange Cures (Lond., 1723, espec. pp. 34–38. (The first ed. appeared in 1666.) Greatrak, a suggestive name, claimed to be divinely inspired to heal by stroking, and went about Ireland and England caressing the multitude with great success. Drinking his urine proved an infallible cure for every variety of illness.
14. See, for a seventeenth century protest against medical secrecy and monopoly, CULPEPPER, N. Galen's Art of Physick. Translated into English, & Largely Commented Upon, etc. Lond. 1662, preface, *passim.* On Culpepper himself, consult Rohde, *op. cit.*, pp. 163–167.
15. BAYNARD, E., The Doctor's Decade, or The Utensils of his Trade. Appended to his Health, A Poem. Ed. 7, Lond.,

1742, pp. 37, 39. Note also such pamphlets as Biggs, N. The Vanity of the Craft of Physick, etc. Lond., 1651; Harvey, G., Vanities of Philosophy and Physick. Ed. 3, Lond., 1702, etc. The reference at the end of the quotation is presumably to the "South Sea Bubble."

16. Peaslee, E. R. Comparative Intellectual Standing of the Medical Profession. Concord, N. H., 1851, pp. 3, 4.

17. *Cf.* Lussauld, Apologie pour Les Médecins, etc. Paris, 1663, pp. 2–9, 126; with J. L. Brachet, Refutation de l'Opinion qui accuse Les Médecins d'Atheisme et de Materialisme. Lyon, 1834. The latter notes (p. 4) that a common adage of his day was to the effect that: "Ubi tres medici, duo athaei."

18. As in the discourse entitled Friendly Address to the Medical Profession on Christianity. (Edinb., 1858, 16 pp., *passim*).

19. Given in several statements in the introduction to his Primitive Physick, etc. (Ed. 1, Lond, 1747). The "Brunonians" were especially accused of scepticism; see The state of medicine in America, *Analectic Mag.*, 14. 130, 1817.

20. See, *e.g.*, Eve, P. F. A Consideration of Some of the Many Popular Errors in Regard to Medicine and Medical Practitioners. St. Louis? 1869, p. 4; Bartol, C. A. Discourse on the Occasion of The Death of Dr. George C. Shattuck. Boston, 1854, pp. 12, 13.

21. Garrison, *op. cit.*, pp. 389–391. The feeling that physicians should not possess high social rating, however, seems to have lingered into the nineteenth century in England, if George Eliot is to be trusted. Chap. 10 of "Middlemarch" is particularly interesting in this connection.

22. Even the best educated classes continued their confidence in frauds of one sort or another. Perhaps the best example of this is to be found in the case of Joanna Stevens, whose worthless secret remedy for stone was actually purchased by Parliament for £5,000 in 1739. An American state paid $10,000 for a quack hydrophobia remedy, early in the nineteenth century. If some pessimist observes that educated people *still* patronize quacks, and that we have made no progress in this respect, let him try to imagine Congress in the act of buying the receipt of "Father John's Medicine," or the secrets of "Lydia Pinkham's Pills."

23. Note, *e.g.*, the 60 pages of testimonials in Greatrak, *op. cit.*, pp. 39–99.

24. Not so the untutored savages of new worlds, however. The natives of Borneo, *e.g.* ridiculed the Europeans for their addiction to blood-letting, "for letting out their very lives and souls willingly." Such expressions of barbaric ignorance were doubtless quite shocking to the sophisticated European mind. See Middleton, C. T. A New and Complete System of Geography; Also a Compendious History of every Empire, Kingdom, State, etc. Lond. 1778, 1: 212.

25. *Edinburgh Rev.*, 81: 248, 249. See also *Dublin Rev.*, 18: 182–185; *North Amer. Rev.*, 32: 375, ff. 1831; *Chambers Journal*, in the *Eclectic Mag.*, 17: 520–526, 1849, etc. As a writer quoted in the latter journal (p. 521) observes, it was not that the apothecary gave too much physic simply for gain, but that, starting with a mercenary motive, "he ends by believing in its necessity." There is a picture of the apothecary at his worst, in Crabbe's "Village"; see his Works, Lond., 1840, 2: 85, 86.

26. *E.g.*, Archer, J. Every Man His Own Doctor, etc., Lond, 1673.

27. See Sudhoff, K. Historische Abteilung: Internationale Hygiene Ausstellung. Dresden, 1911, p. 209, ff.; and also various essays by the same author; e.g., Hygienic directions for travelers during the middle ages, transl. by John Ruhrah, in Garrison, F. H. Essays in the History of Medicine, by Karl Sudhof. N. Y., 1926, pp. 251–254.

28. Thus Baynard, whose satire on physicians has been quoted above, wrote a long and readable work entitled "Health, A Poem," the seventh edition of which appeared in London,

1742. As many of the ideas expressed seem sound, we are apt to note complacently that "it has a modern ring." Here, for instance (pp. 24, 25), is advice popular with the "modern parent":

But above all, take especial Care
How Children you affright and scare . . .
Terrors have changed some men grey,
Took Limbs, and Speech, and Sense away.

Or consider this advice (pp. 29, 30) to gymnasium instructors:

Of exercises, *Swimming's* best,
Strengthens the Muscles of the Chest,
And all their fleshy Parts confirms
Extends, and stretches Legs and Arms, . . .
As 'tis the best, so 'tis the Sum
Of *exercises* all in one;
And of all Motions most complete,
Because 'tis vi'lent without Heat.

29. A list of some 1900 items is given in the second volume of Sinclair, J. Code of Health, Edinb., 1808.

30. Fairly detailed works were occasionally issued as early as the seventh century, however; *e.g.*, Nicholas Culpepper, *op. cit.*, (1622). Some of the eighteenth century prose works, as well as the verse, strike a very modern note at times. Note, *e.g.*, the title: A Serious Address, on the Dangerous Consequences of Neglecting Common Coughs and Colds, by Thomas Hayes (1st Amer., from the 4th Lond. ed., Bost., 1796). The author marvels (p. 5, ff.) that so widespread a menace as the common cold is so generally neglected [!]

31. An edition so labeled appeared at Cincinnati, in 1870.

32. London *Times*, Mar. 31, 1835, commenting upon Edward Jukes, On Indigestion, With Advice for the Use of Lavements, etc. (Ed. 4, Lond. 1835). The same issue of the *Times* advertised no less than six other popular medical works.

33. This was the opinion of at least one American observer; *viz.*, Hodges, J. A. The forgotten doctor. *Trans. M. Soc. Va.*, Richmond, p. 22, 1897.

34. The following offers a typical eighteenth century satirical observation on professional ethics, or the lack of any: "Now I take this to be the perfection of a Physician, to bring People not to judge harshly, in case the Person dies. And indeed it should be considered how uncertain the Art is . . . It is with much difficulty that we bridle the tongues of Nurses, Midwives and chamber-maids, unless oftentimes we give them higher Fees than we and our servants get from the Undertakers"; King, W. Voyage to the Island of Cajamai in America. Lond., 1709, p. 30.

35. Feihoo, B. G. An Exposition of the Uncertainties in the Practice of Physick. Transl. from the 7th Spanish ed., (Lond., 1751). He mentions (p. 8) a comprehensive Spanish criticism of medical science, which preceded his own.

36. *Ibid.*, pp. 3, 10–19, 52, 53, etc.

37. *Ibid.*, p. 7.

38. "It has become fashionable to speak of the Medical Profession," wrote an American editor as late as 1857, "as a body of jealous, quarrelsome men, whose chief delight is in the annoyance and ridicule of each other." *Cincin. M. Obs.* 2: 129, 1857.

39. Feihoo, *op. cit.*, pp. 10–19, 42.

40. Robinson, T. The Gold-Headed Cane. In: Andrews, W. The Doctor in History, Literature, Folk Lore, etc., p. 35.

41. The last three "systems" are well described in such studies as Thomson, S. A Narrative of the Life and Medical Discoveries of, Written by Himself. Bost., 1822 (a 10th ed. appeared at Columbus, Ohio, in 1835); Rose, J. S., The Reformed Practice of Medicine; Based Upon the Principles of the Chrono-Thermal System, etc. Phila., 1845. Hydropathy is explained and defended in Horsell, Wm., v.d.m., i.o.r. [?] The Board of Health and Longevity: or Hydropathy for the People; Consisting of Plain Observations on Drugs, Diet, Water, Air, Exercise, etc. Lond., 1845; espec. pp. 180, ff.

42. An example of denunciation by the chrono-thermalists is given in Rose, *op. cit.*, pp. 4–11; a readable homeopathic satire is in Helmuth, W. T., Medical Pomposity, or The Doctor's Dream. Detroit, 1866, espec. pp. 7, 8;

Horsell, *op. cit.*, pp. 130–156, gives the hydropaths' indictment of the regular school.

43. Hahnemann published his work on chronic diseases in 1829, and in the same year established the central society of German homeopaths. At about this time the movement spread to France and England, and began to appear in the United States between 1832 and 1835. A definite break with the regular profession occurred in New York City in 1838, and from that time forward the movement remained more clearly distinct from the "old school" in the United States, than it did in Europe. *Cf.* Kirby, S. R. The Introduction and Progress of Homeopathy in the United States. N. Y., 1864, pp. 10, 15; and Heidhard, C. Homeopathy in Europe, Phila., 1878, *passim.*

44. The prospectus of this "Penn Medical College at Philadelphia" is given in Dickson, S., The Destructive Art of Healing, or Facts for Families . . . to Which is Added A Word to Woman, by Lydia Jane Pierson. 1st Amer. ed. from 2nd Lond. ed., N. Y., *ca.* 1855, pp. 42–44. Dickson, an Englishman, was the founder of the Chrono-Thermal system, and his book noted achieved at least 13 editions within a few years. There were also "Eclectic" medical colleges of a "school" which traced its origins to Boerhaave.

45. Dr. Paul F. Eve, a leading Southern surgeon, declared that Thomsonianism had its origin in the growing "prejudice" against mercury; see his Present Position of the Medical Profession in Society. Augusta, Ga., 1849, p. 17.

46. Mitchell, T. D. Calomel considered as a poison. *New Orleans M. J.*, 1: 30 ff., 1844.

47. Cartwright, C. B., History of medical legislation in the State of New York. *N. Y. J. Med.* 4: 160, 1845. (Quoting a county medical society report.) See also editorials in the *Cincin. M. Observer*, 2: 155, 1857; and in the *Cincin. Lancet & Observer*, 591, 1866.

48. Eve. *op. cit.*, pp. 13, 17.

49. *M. & S. Rep.* n. s. 1: 127, 1858.

50. *New Orleans M. J.*, 1: 78, (1844).

51. Eve. *op. cit.*, p. 17; Shryock, R. H., (Ed) Selections from the letters of Richard D. Arnold. *Johns Hopkins Hosp. Bull.*, 42: 164, 1928; (Hereafter referred to as the Arnold Letters.)

52. King, G., Sale of quack medicines. *Provincial M. & S. J.*, 8, 596, 1844. (at this time an official organ of the Brit. M. Ass.)

53. Rentoul, R. R., The obligations of medical practitioners and chemists to each other and to the public. *Med. Press & Circular*, n. s. 52: 364, 1892. Friedrich Engels, in his Lage der Arbeitenden Klassen in England (1844), commented frequently upon the common addiction to soothing syrups and other nostrums. His comments are sometimes deprecated as so much socialist propaganda, but they seem generally consistent with the medical evidence.

54. Bourgeau, G., Les Erreurs et les Dangers de la grande Presse en Matière Médicale. Paris, 1916, pp. 37–39.

55. Magnus, H. Die Kurierfreiheit, und das Recht auf den eignen Körper: Ein geschechtlicher Beitrag zum Kampf gegen das Kurpfuschertum. Breslau, 1905, pp. 1–4.

56. For such opinions see, *e.g.*, the Boston *Health J. & Advocate of Physiol. Reform*, May 20, 1840.

57. Interesting notes on Bronson Alcott, (who, as an extreme vegetarian, suggests the relationship obtaining between hygienic reform and other perfectionist movements of the day), are given in Seldes, G. The Stammering Century. N. Y., 1928, pp. 207–225. Not to be confused with him, is Dr. Wm. Alcott, noted above; who wrote voluminously on popular hygienic reform.

58. Boston *Health J. & Advocate*, etc., April 1, 1840.

59. Boston, New York City, Philadelphia and Cincinnati, were the chief centers of publication. Most of these journals ran for only a few issues, or a few volumes at most; but new ones were ever appearing. Certain of these periodicals; e.g. Wm. A. Alcott's *Moral Reformer* (Boston, 1835) afford

a good picture of the extensive ramifications of the popular hygiene movement.

60. Thus the *Gazette de Santé* appeared at Zurich as early as 1782; German journals appeared at Greitz, 1828, and at Weimar, 1835; French journals at Reims, 1832; Paris, 1835; an Italian at Milano, 1862, etc. There was also a crop of British periodicals.
61. See Packard, F. R., The History of Medicine in the United States. Phila., 1901, chaps. 4 & 5, *passim;* Davis, N. S., History of Medical Education and Institutions in the United States. Chicago, 1851, *passim.*
62. The English apothecaries, like the graduates of the low-grade American medical schools, responded to a demand occasioned by an increasing population, whose needs were not met by the limited number of well-trained physicians. It has been pointed out that these developments were inevitable in such large and rapidly growing countries as the United States and Russia; (see Garrison, *op. cit.*, p. 763, for his notes on Abraham Flexner's studies in medical education); but apparently the single factor of a growing population might also produce such developments in a relatively small country like England.
63. Phila. *City Item*, Nov. 6, 1858.
64. This episode at the University of Pennsylvania suggests the facts that the medical schools associated with Universities were apt to be of better grade, though there were exceptions to this. It is probable that the tendency to establish independent medical colleges, after the London manner, was a factor in degrading American educational standards. Such colleges might maintain high standing in London, where tradition was a potent force; but in the "free" American environment they often suffered for lack of restraining university influences. This point is clearly stated by Wm. H. Welch, in "Some of the Conditions Which Have Influenced the Development of American Medicine, Especially During the Last Century," (*Johns Hopkins Hosp. Bull.*, 19: 33–40 1908).
65. The Elmira *Daily Gazette*, May 20, 1879.
66. Feb. 5, 1859.
67. See The Phila. *M. & S. Rep.* n. s., 1: 356, 1859.
68. See the *N. Y. J. Med.*, 5: 267–269, 1845; Paine, M. A Defence of the Medical Profession in the United States. N. Y., 1846, pp. 11, 12; *Phila. Med. & Surg. Rep.* n. s., 1: 187, 1858.
69. Pratt, B. H., *The Bistoury*, (Elmira, N. Y.), 5: 237, 1871.
70. Small, E. A., Hahnemann and His Doctrines. Chicago, 1861, pp. 29, 30.
71. Arnold Letters, p. 182.
72. *N. Y. J. of M. Sc.*, 5: 271, 272, 1845.
73. Eve, P. F., *op. cit.*, p. 14.
74. *Ibid.*, pp. 6, 9. It is almost trite to observe that the public press misrepresented medical news, partly through technical ignorance, partly through a desire to be sensational. It is interesting to note, however, that more attention seems to have been given to medical news as the century advanced, perhaps because of the growing number of medical discoveries. An interesting survey of such news and such misrepresentation, in the French press, is given in Bourgeau, G. Les Erreurs et les Dangers de la Grande Presse en Matière Médicale. These, Paris, 1916, pp. 7–34.
75. Edgar Allan Poe's well-known short story, concerning premature burial, expresses the fear then current.
76. An interesting description of frontier efforts at post-mortem examinations, made secretly by candle-light at the graves, is given in Graff, G. B., The milk sickness of the west. *A. J. M. Sci.*, n.s., 1: 366, 1841.
77. See, *e.g.*, the description of the "Doctors' Riot" of New York City (1788) in Walsh, J. J., History of Medicine in New York. N. Y., 1919, 2: 382–385.
78. Garrison, *op. cit.*, pp. 447, 448, n. See Ball, J. M., The Sack-'Em Up Men, etc. Edinb. *passim.*, 1928.
79. This first act in the English-speaking countries is given in the *Boston M. & S. J.*, 4: 85–87, 1831. The public address of the State Medical Society, which was the immediate occasion of this pioneer legislation, is given in the *North Amer. Rev.*, 33: 64–73, 1831.

80. A good brief history of the whole vaccination controversy is Stern, B. J., Should We Be Vaccinated? etc., N. Y., 1927. As a sample of recent opposition, Peebles, J. M. Vaccination a Curse, etc. Battle Creek, Mich., *ca.* 1910, 326 pp.

81. As in the work of the French physician, Magendie, whose pioneer work in experimental physiology was indeed often "needlessly cruel," (Garrison, *op. cit.*, 465.)

82. The Island of Dr. Moreau, A Possibility, N. Y., 1896, the outstanding nightmare of the writer's boyhood.

83. Most analyses of the situation made by physicians note this tendency; see, *e.g.*, Yager, S. C., The medical profession and its standing in society. *Cincin. Lancet & Obs.*, 9: 592, 1866; Graham, S. Lectures on human life, as reported in the Boston *Health J. & Advocate of Physiol. Reform*, June 24, 1840. For an illustration of the popular demand for a *laissez faire* medical regime, see "The Medical Controversy," *U. S. Democratic Review*, whole ser., 35: 263–270, 1855, in which the author proposes (p. 270) that "the public will act as an umpire" between the regulars and irregulars, "and decide after a careful perusal of the undertakers' bills."

84. *Proc. Conn. M. Soc.*, May, 1844, p. 47.

85. See the Arnold Letters, pp. 169, 171.

86. Simon. English Sanitary Institutions, p. 269

87. *Ibid.*, pp. 273, 274.

88. The early history of medical legislation in New York State illustrates this tendency. It is well summarized in Coventry, C. B., History of medical legislation in the State of New York. *N. Y. J. of. Med.*, 4: 152, 1845. *Cf.* Garrison, F. H., History of Medicine, (Ed. 4: p. 304). For notes on the history of other states in the same period, see, Cartwright, *sufra.* note 1; Hooker, *op. cit.*, p. 47 ff.; *New Orleans M. J.*, 1: 77–83, 97–99, 1844, etc.

89. See the *Journals* of the Georgia House and Senate for 1847–'48, and 1849–'50, *passim.*

90. This data is given in a report made to the Monroe County, N. Y., Medical Society, 1844, and is reprinted in Coventry, *op. cit.*, p. 160, from the proceedings of the N. Y. State Med. Soc. for that year.

91. See the *U. S. Democratic Rev.*, whole ser., 35: 270, 1855; *North Am. Rev.*, 33: 370, 1831.

92. Coventry, *op. cit.*, p. 160.

93. *Ibid.*, p. 160.

94. Mohl, R. V., Die Polizei-Wissenschaft Nach den Grundsätzen des Rechtsstaates. Tübingen, 1833, 1: 135; *cf.* The Report from the Poor Law Commissioners on the Sanitary Condition of the Laboring Population of Gt. Britain. Lond., 1842, pp. 288, 289. See also Simon. English Sanitary Institutions. p. 269, ff. Mohl (in his 3rd edition, 1866, 1: 255, note 1) makes the interesting observation that while the laws of most German states forbid all irregular practice, the French and British governments "legen kienen so grossen Werth auf diesen Theil der Medicinal-Polizei; von Nordamerika gar nicht zu reden."

95. McMaster, J. B., History of the People of the United States, 1: 27 ff., gives a very favorable picture of the American physician of c. 1790, and of the high degree of public esteem in which he was held. Fifty years later, this esteem was not always so great.

96. Virginia Jefferson Randolph, to Nicholas Trist, Monticello (Va.), July 26, 1822, *Trist. Mss.* (Lib. of Cong.).

97. Reynold, J. R., On the Relation of Practical Medicine to Philosophic Method, and Popular Opinion. (Address before the North London Med. Soc.) Lond., 1858, p. 19.

98. Baronetcies Conferred on Physicians, etc. A "Return" from the Home Office to Parliament Lond., Aug. 14, 1883.

99. *The Christian Examiner*, quoted in the *Boston M. & S. J.*, 4: 10, 1831. The editor is here speaking of the profession as a whole. Other observers pointed out that most laymen thought little of this, but much of their own individual physicians. Indeed, some critics believed that most doctors gained prestige from the low standing of the profession at large; since *each* one seemed, to his patients, an *unusual* talented exception to average medio-

crity; see the *North Am. Rev.*, 32: 368, 1831.

100. Note Eve, *op. cit.*
101. Note article of that title in the *M. & S. Reporter*, n.s., 1: 141–143, 1858.
102. At least one lay editor admitted and deplored this. See the Phil. *North American*, for May 1, 1855.
103. See Schroeder, W., Honors that have come to the medical profession, in America. *Brooklyn M. J.*, 19: 297–306, 1905; and editorial notes in *La Chronique Medicale* (Paris), pp. 247, 381, 413, 1895, etc.
104. See ed. in the *Cincin. Lancet & Obs.*, 19: 56, 1866.
105. Present Position of the Medical Profession in America, p. 20.
106. *Boston M. & S. J.*, 4, 96, 97, 1831. The editor observed that it "will be some time before we see such minute pathological investigations from the pen of a female in this country."
107. See, *e.g.*, the *Savannah M. J.*, 1859.
108. This was true of the majority of American newspapers, 1849–1852, when women physicians were first receiving publicity.
109. Shattuck, G. C., The Medical Profession and Society. Boston, 1866, p. 29.
110. King, G., Sale of Quack Medicines. *Prov. M. & S. J.*, 8: 596, 1844. The tendency of American clergy to meddle in medicine may, perhaps, be interpreted as a vestige of the combination of the two professions, which was common prior to the nineteenth century.
111. See ed. in the *M. & S. Reporter*, n.s., 1: 263, 1858.
112. Eve, *op. cit.*, p. 20.
113. This neglect has persisted into recent days, a notorious example being the United States Government's relative neglect of the men associated with the Reed Board's yellow fever experiments in Cuba.
114. Eve, *op. cit.*, pp. 11–13.
115. A strong statement of this old, and more or less justifiable professional grievance, is given by Keen, W. W., Debt of the public to the medical profession. *Phil. M. J.*, 3: 939–946, 1899.
116. *Cincin. M. Obs.*, 2: 508, 1857.
117. Letourneur, L. B. A., Rapports Du Médecin avec La Société en Général. Paris, 1821, p. 23 (thèse).
118. The evidence available in general medical literature suggests, naturally enough, wide variation in rates; and therefore is not easily reducible to averages, means, or any other mathematical form of statement.
119. See *M. & S. Reporter*, n.s., 1: 142, 1858; Letourneur, *op. cit.*, p. 26.
120. The writer has examined a number of itemized bills for medical services to slaves.
121. See Arnold Letters, p. 161.
122. *Ibid.*, p. 164.
123. Rosenfeld, S., Ueber die Lage des ärztlichen Standes. *Med. Bl.*, *Wien*, 18: 5–8, 1895.
124. Bauer, L., On the declining relations of the medical profession to the public. *Cincina. M. Obv.* 2: 106, 1857. Bauer was a prominent German surgeon who came to the United States, probably during the revolutionary period in the Fatherland, and was much shocked by American moral conditions. See also, Houghton, R. E., Report on Obstetrics. *Cincin. Lancet & Obs.*, 9: 138, 1866; and the reports of A. M. A. Committees given in the *Trans. Am. M. Ass.*, 2: 520, 1849; 10: 93–99, 1857.
125. A strong English protest on this point is given in the *Med. Press. & Circular*, n.s., 53: 445, 1892.
126. *Trans. Am. Med. Ass.*, 9: 368, 369, 1856. For Holmes' interesting essay on American medical literature, see *ibid.*, 1: 283–288, 1848.
127. There is a suggestive analysis of the several stages involved in this process, in Fox, D. R., Civilization in transit. *Am. Hist. Rev.*, 32: 753 ff., 1927.
128. Some critics have even thought that it was *after* the Civil War that conditions became especially bad, and "that the whole character of the profession suffered." (Leake, C. D., Percival's Medical Ethics. Balt., 1927, pp. 51, 52). The evidence noted above would suggest that these phenomena had appeared long before 1861.
129. Arnold Letters, p. 218.
130. *N. Y. J. Med.*, 5: 415, 1845.
131. A plan sponsored (1858) by the New Jersey State Med. Soc.; see *M. & S. Reporter*, n.s., 1: 283, 1859.

132. Bauer, *op. cit.*, p. 100.

133. For instance, Erlangen and Heidelburg. See the *Edinb. Rev.*, 81: 254, 1845.

134. Rosenfeld, S., Ueber die Lage des ärztlichen Standes. *Med. Bl., Wien.* 18: 5.

135. Rasse, F., Von der Stellung der Aerzte im Staate, Vorwort. Leipzig, 1823.

136. *Edinb. Rev.*, 81: 252.

137. Simon. English Sanitary Institutions, p. 273.

138. *Edinb. Rev.*, 81: 250.

139. See articles noted above in the *Edinb. Rev.*, the *Dublin Rev.*, etc.

140. Simon, *op. cit.*, 274.

141. Note Mitchell, T. D., Calomel considered as a poison. *N. Orleans M. J.*, 1: 30, ff., 1844. There were some ups and downs in professional attitudes towards blood-letting (see, *e.g.*, Jackson, R., History and Cure of Contagious Fever, Lond., 1819, preface, p. 10), but the trend was definitely towards moderation by the middle of the nineteenth century.

142. See the Arnold Letters, pp. 227–229.

143. Mayo, W. J., The medical profession and the public. *J. A. M. Ass.*, 76: 923, 1921.

144. See the *M. & S. Reporter*, n.s., 1: 299, 1859, for a denunciation of homeopathy.

145. See, *e.g.*, *Boston M. & S. J.*, 4: 53, 1831.

146. See, *e.g.*, Peaslee, E. K., Comparative Intellectual Standing of the Medical Profession. Concord, N. H., 1851, p. 28.

147. On this whole subject of Percival, and the American codes, see Leake, C. D. Percival's Medical Ethics, Balt., 1927, espec. pp. 45–56.

148. Ferriar, J., Medical Histories. Lond., 1810, 2: 213–247.

149. On rising urban mortality rates in Gt. Britain, see Farr, W., On the causes of mortality in town districts. *Prov. M. & S. J.*, 7: 439–441, 1844; wherein this great authority remarks (p. 441) that: "It is proven beyond doubt that, if the population be the same in other respects, an increase of density implies an increase of mortality; and that the ratio of increase . . . is as certain roots of density." For references to concomitant increases in the United States, see Shryock, R. H., Origin and significance of the public health movement in the United States. Ann. of Med. Hist., n.s. 1: 645, 1929.

It may be noted, in passing, that mortality rates during the eighteenth century had been stationary or tended, to fall somewhat. See Singer, C. A Short History of Medicine, Oxford, 1928, pp. 174–177; and Shattuck, L., On the vital statistics of Boston. *A. J. M. Sc.*, n.s., 1: 369–401, 1841.

150. The best general account of the British story, from an administrative point of view, is in Sir John Simon, *op. cit.*, *passim.*

151. Not to be confused with the popular, perfectionist health movement noted above in this paper. For a description of the early scientific public health movement in the United States, see Shryock, *op. cit.*, References are given therein to some sources for the same story in France and Germany.

152. For the fascinating story of the evolution of modern preventive medicine, see Newsholme, Sir A., Evolution of Preventive Medicine, Balt., 1927, and his Story of Modern Preventive Medicine, Balt., 1929.

153. The present mental attitude and tendencies of the medical profession. *New Englander*, 10 (n.s. 4): 557, 558, 1852.

154. . . . "today homeopathy is a part of regular medicine," William J. Mayo, *J. A. M. Ass.* 76: 923, 1921.

155. Occasional expressions of it, of course have occurred in recent years. Thus Dr. F. W. Mann remarks, as late as 1925: "I wonder if the medical man is held in as high esteem, or is as important a factor in the community as was his confrère a half century ago?" (*J. Maine M. Ass.*, 16: 137.) He then answers in the negative. Yet "half a century ago," as a matter of fact, his confrères were asking the same question about *their* predecessors, and were even more pessimistic in their replies.

156. The present situation is carefully analyzed in Moore, H. American Medicine and the Peoples Health. N. Y., 1927, *passim.*

157. See The Five Year Program of the Committee on the Cost of Medical Care, Wash., D. C., 1928, *passim.*

INCUNABULA IN THE NEW YORK ACADEMY OF MEDICINE*

1. Abraham Ben-Ezra. De luminaribus et diebus criticis. [Padua. Matthaeus Cerdonis], 7 Feb. 1482.
Quarto.
[H.22; GW.112.]

2. Aegidius Corboliensis. De urinis, with commentary by Gentilis de Fulgineo. Padua, Matthaeus Cerdonis, 12 July 1483.
Quarto.
[H.100; GW. 269.]

3. Albertus Magnus. De animalibus. Mantua, Paulus de Butzbach, 12 Jan. 1479.
Folio.
[H*546; GW. 588.]

4. Albertus Magnus. Liber aggregationis de virtutibus herbarum, lapidum et animalium. [Cologne, Cornelis de Zierikzee, after 1500?].
Quarto.
[GW. 658.]

5. Albertus Magnus. Phisica. Venice, Johannes et Gregorius de Gregoriis, 31 Jan. 1494/5.
Folio.
[H*519; GW. 717. BMC.v, 346.]

6. Alchabitius. Libellus isagogicus. Johannes de Saxonia. Commentum super Alchabitium. Venice, Erhard Ratdolt, 1485.
Quarto.
[H*617; GW. 844; BMC.v, 290.]

7. Argellata, Petrus de. Chirurgia. Venice, 28 April, 1492.
Folio.
[H*1636; GW. 2322; BMC.v, 586.]

8. Argellata, Petrus de. Chirurgia. Venice, Bonetus Locatellus for Octavianus Scotus, 8 Kal. Mar. [22 Feb.] 1497/8.
Folio
[H.1637; GW.2323; BMC.v, 449.]

9. Aristoteles. De animalibus. Venice, Johannes de Colonia & Johannes Manthen Gheretzen, 1476.
Folio.
[H*1699; GW. 2350; BMC.v, 232.]

10. Aristoteles. Problemata. [Cologne, Heinrich Quentell, *ca.* 1495].
Quarto.
[H*1722; GW.2473.]

11. Arnoldus de Villanova. Breviarium practicae medicinae. Milan, Christophorus Valdarfer, 26 April 1483.
Folio.
[H*1800; GW.2526.]

12. Arnoldus de Villanova. Breviarium practicae medicinae. Venice, Otinus Papiensis de Luna, 12 Kal. Nov. [21 Oct.] 1497.
Folio.
[H*1802; GW. 2529.]

13. Arnoldus de Villanova. Speculum medicinae. [Leipzig, Martin Landsberg, after 1495].
Quarto.
[H*1803; GW.2534; BMC.iii, 640.]

14. Articella. Thesaurus operum medicorum antiquorum. Venice, Baptista de Tortis, 20 Aug. 1487.
Folio.
[H. 1870; GW.2679; BMC.v, 325.]

15. Apicius. De re coquinaria. Milan, Gulielmus Signerre Rothomagensis for Johannes de Legnano, 20 Jan. 1498.
Quarto.
[H.1283; GW.2267.]

16. Apicius. De re coquinaria. Venice, Bernardinus Venetus de Vitalibus, [ca. 1500].
Quarto.
[H*1282; GW.2268. BMC.v, 550.]

Astronomices Veteres, see Firmicus Maternus, Julius.

17. Avenzoar. Theisir libri III. Averroes. Colliget libri VII de medicina. Venice, Bonetus Locatellus for Octavianus Scotus, 31 May 1496.
Folio.
[H. 2187; GW.3104; BMC.v, 446.]

18. Avicenna. Canon de medicina. Lib. I-V. De viribus cordis. Venice, Petrus Maufer et socii, 10 June 1486.
Quarto.
[H*2205; GW.3120; BMC.v, 298.]

19. Avienus, Rufus Festus. Carmina. [With other tracts.] Venice, Antonius de Strata, 8 Kal. Nov. [25 Oct.] 1488.
Quarto.
[H*2224 = 2223; GW.3131; BMC.v, 294.]

20. Bagellardus, Paulus de Flumine. De infantium aegritudinibus et remediis. [Padua,] Matthaeus Cerdonis, 10 Nov. 1487.
Quarto.
[H.2245; R.i, 99.]

21. Barbarus, Hermolaus. Castigationes Plinianae. Emendatio in Melam Pomponium. [Venice, for Daniel Barbarus, 1493/4.]
Folio.
[H*2420; GW.3341; BMC.v, 587.]

*This list was compiled by Miss Lesta Ford for Dr. Archibald Malloch, Librarian of the New York Academy of Medicine.

22. Bartholomaeus Anglicus. De proprietatibus rerum. Nuremberg, Anton Koberger, 3 Kal. June [30 May] 1483.
Folio.
[H*2505; GW.3409; BMC.ii, 425.]

23. Bartholomaeus Anglicus. De proprietatibus rerum. Strassburg, [Printer of 1483 Jordanus of Quedlinburg-(Georg Husner)], die S. Valentini [14 Feb.] 1485.
Folio.
[H*2506; GW.3410; BMC.i, 132.]

24. Bartholomaeus Anglicus. Le proprietaire des choses. Lyons, for Jean Jenin le Dyamantier, 17 April 1500.
Folio.
[H.2519; GW.iii, col.425 (not described).]

25. Barzizius, Christophorus. Introductorium sive Janua ad opus practicum medicinae. Rhazes. Liber IX Almonsoris, with commentary by Barzizius. Pavia, Antonius de Carchano, 20 Aug. 1494.
Folio.
[H*2666; GW.3672.]

26. Benedictus de Nursia. De conservatione sanitatis. Thaddaeus de Florentia. De regimine sanitatis. [Probably by Johannes Hispalensis.] Bologna, Domenicus de Lapis for Sigismundus a Libris, 1477.
Quarto.
[H*11920; GW.3819.]

27. Boetius, Anicius Manilius Severinus. De consolatione philosophiae et de disciplina studiorum, with commentaries by Thomas Aquinas. Lyons, Johannes de Vingle, 10 April, 1499.
Quarto.
[Pell.2541.]

28. Brandt, Sebastian. Stultifera navis. Basel, Johann Bergman de Olpe, Kal. Mar. [1 Mar.] 1498.
Quarto.
[H*3751.]

29. Brunschwig, Hieronymus. Buch der Chirurgia. Augsburg, Johann Schönsperger, Dec. 1497.
Folio.
[H*4019; BMC. ii, 371.]

30. Brunschwig, Hieronymus. Buch der Vergift der Pestilentz. [Strassburg], Johann Grüninger, Mitwoch nach unser lieben Frauen Himelfart, [19 Aug.] 1500.
Folio.
[H*4020; BMC. i, 115.]

31. Brunschwig, Hieronymus. Distillierbuch. Strassburg, Johann Grüninger, 8 May 1500.
Folio.
[H*4021; BMC.i, 114.]

32. Celsus, Aurelius Cornelius. De medicina. Florence, Nicolaus Laurentius, 1478.
Folio.
[H*4835.]

33. Celsus, Aurelius Cornelius. De medicina. Venice, Johannes Rubeus Vercellencis, 8 July 1493.
Folio.
[H*4837; BMC. v, 417.]

34. Cermisonus, Antonius. Consilia contra omnes aegritudines. [With other tracts.] Venice, [Bonetus Locatellus for] Octavianus Scotus, [*ca.* 1496].
Folio.
[H*4884; BMC.v, 453.]

35. Collenucius, Pandolphus. Pro Plinio adversus Nicolai Leoniceni accusationem et Hermolai Barbari castigationes. Ferrara, Andreas Beaufort Gallus, [1493]
Quarto.
[H*5483.]

36. Comestor, Petrus. Historia scholastica. Strassburg, Johann Grüninger & Heinrich of Ingweiler, 28 Aug. 1483.
Folio.
[H*5532; BMC.i, 102.]

37. Conrad von Megenburg. Buch der Natur. Augsburg, Johann Bämler, Mitwoch vor Barthomei [19 Aug.] 1478.
Folio.
[H*4042.]

38. December, Petrus Candidus. De genitura hominis. [Rome, *ca.* 1498.]
Quarto.

39. Dinus de Garbo, Florentinus. Compilatio emplastrorum et unguentorum. Ferrara, Andreas Beaufort Gallus, 28 Oct. 1489.
Folio.
[H*6170.]

40. Dinus de Garbo, Florentinus. Expositio super 3^a et 4^a parte et 5^a parte fen quarti canonis Avicennae. Ferrara, Andreas Beaufort Gallus, 27 Oct. 1489.
Folio.
[H*6166.]

41. Dondis, Jacobus de. Aggregator Paduanus de medicinis simplicibus. Venice, [for Michael Manzolus], 10 Kal. Jun. [23 May] 1481.
Folio.
[H*6396; BMC.v, 315.]

42. Eschuid, Johannes. Summa astrologiae judicialis. Venice, Johannes Lucilius Santriter, for Franciscus Bolanus Candianus, non. July, [7 July] 1489.
Folio.
[H*6685; BMC.v, 462.]

43. Falcutius, Nicolaus. Sermones septem medicinales: Sermo tertius de membris capitis. Venice, Bernardinus Stagninus de Tridino, 24 Dec. 1490.
Folio.
[H*11768; BMC.v, 366.]

44. Ferrari de Gradi, Johannes Matthaeus. Expositiones super 22^a fen tertii canonis Avicennae. Milan, Jacobus de Sancto Nazario de la Ripa, 17 Nov. 1494.
Folio.
[H*7840; R.ii, 178.]

45. Ficinus, Marsilius. De triplici vita. Florence, Antonio Miscomini, 3 non. [3 Dec.] 1489.
Folio.
[H*7065.]

46. Ficinus, Marsilius. De triplici vita. [Basel, Johann Amerbach, not after 1498.]
Quarto.
[H*7063; BMC.iii, 759.]

47. Firmicus Maternus, Julius. De nativitatibus [with other tracts]. Venice, Aldus Manutius, June [17] -Oct. 1499.
Folio.
[H*14559; BMC. v, 560.]

48. Gazius, Antonius. Corona florida medicinae. Venice, Johannes & Gregorius de Gregoriis, 20 June 1491.
Folio.
[H*7501; BMC.v, 341.]

49. Gerson, Johannes. De pollutione nocturna tractatulus. [Cologne, Ulrich Zell, *ca.* 1470.]
Quarto.
[H*7695.]

50. Gordonio, Bernardus de. Practica dicta Lilium medicinae. Venice, Bonetus Locatellus for Octavianus Scotus, 11 Kal. Jan. [22 Dec.] 1498.
Folio.
[H*7800; BMC.v, 451.]

51. Gordonio, Bernardus de. Tractatus urinarum cum tractatu de pulsibus. Ferrara, Andreas Beaufort Gallus, 4 Mar. 1487.
Folio.
[H.7804; Pell. 5280.]

52. Guainerius, Antonius. Opera medica. Pavia, Antonius de Carchano, 1481.
Folio.
[H.8097; R.v, 130.]

53. Guainerius, Antonius. Opera medica. Venice, Johann Hamman Hertzog for Antonius Morettus, 27 May 1500.
Folio.
[H.8100; BMC.v, 429.]

54. Gulielmus de Saliceto. De salute corporis. Johannes de Turrecremata. De salute animae. [Cologne, Cornelis de Zierikzee, *ca.* 1490.]
Quarto.
[H*14150; BMC.i, 306.]

55. Gulielmus de Saliceto. Summa conservationis et curationis libri iv. Chirurgia libri v. Venice, [Marinus Saracenus], 4 June 1489.
Folio.
[H.14149; BMC.v, 414.]

56. Guy de Chauliac. Chirurgia magna. [With other tracts.] Venice, Bonetus Locatellus for Octavianus Scotus, 11 Kal. Dec. [21 Nov.] 1498.
Folio.
[H.4811; BMC.v, 451.]

57. Guy de Chauliac. Chirurgia parva. [With other tracts.] Venice, Bonetus Locatellus for Octavianus Scotus, 6 Kal. Feb. [27 Jan.] 1500.
Folio.
[H.4813; BMC.v, 453.]

58. Hippocrates. De natura hominis. [Rome, *ca.* 1490.]
Quarto.
[H*8669; BMC. iv, 122.]

59. Hippocrates. De natura hominis. [Rome, *ca.* 1490.]
Quarto.
[H.8670; R.i, 152.]

60. Hortus Sanitatis. [Strassburg, Johann Prüss, 1497.]
Folio.
[H*8941; BMC.i, 124. Klebs, Herbals 3.]
Incomplete.

61. Hortus Sanitatis, translaté en français. Paris, Antoine Verard, [*ca.* 1500].
Folio.
[H.8958; Klebs, Herbals 5.]
Incomplete.

62. Hugo Bentius Senensis. Expositio super I fen primi canonis Avicennae. Antonius Faventius. De febre. Ferrara, Andreas Beaufort Gallus, 13 Aug. 1491.
Folio.
[H.9016; R.ii, 193.]

63. Isidorus Hispalensis of Seville. Etymologiarum libri xx. Paris, George Wolff & Thielman Kerver for Jehan Petit, 25 May 1499.
Folio.
[H*9275.]

64. Johannes Anglicus de Gaddesden. Rosa anglica practica medicinae. Pavia, [Franciscus Girardengus for] Johannes Antonius Birreta, 24 Jan. 1492.
Folio.
[H*1108.]

65. Kethamo Johannes de. Fasciculus medicinae. Venice, Johannes & Gregorius de Gregoriis, 15 Oct. 1495.
Folio.
[H*9775; BMC.v, 347.]

66. Ketham, Johannes de. Fasciculus medicinae. Venice, Johannes & Gregorius de Gregoriis, 28 Mar. 1500.
Folio.
[H*9776; BMC.v, 351.]

66a. Lactantius, Lucius Coelius Firmianus. Opera. [Venice], Vindelinus de Spira, 1472.
Folio.
[H*9810; BMC.v, 160.]

67. Lanfranc de Milan. La cirurgie en V tracties. Lyons, Jehan de la Fontayne, 7 Feb. 1490.
Quarto.
[H.9880; Brunet (1862) iii, 816.]

68. Leonicenus, Nicolaus. De Plinii et plurium aliorum in medicinae erroribus. Ferrara, Laurentius Rubeus & Andreas Grassus Castronuovus, 18 Dec. 1492.
Quarto.
[H*10021.]

69. Leonicenus, Nicolaus. Libellus de epidemia quam vulgo morbum Gallicum vocant. [Leipzig, Wolfgang Stoeckel, *ca.* 1500.]
Quarto.
[H*10018.]

70. Leonicenus, Nicolaus. Libellus de epidemia quam vulgo morbum Gallicum vocant. Milan, Gulielmus Signerre Rothomagensis for Johannes de Legnano, 4 July 1497.
Quarto.
[H.10020; R.v, 172.]

71. Leonicenus, Nicolaus. Libellus de epidemia quam vulgo morbum Gallicum vocant. Venice, Aldus Manutius, June 1497.
Quarto.
[H*10019; BMC.v, 557.]

72. [Louffenburg, Heinrich.] Versehung des Leibs. Augsburg, [Erhard Ratdolt], 1491.
Octavo.
[H.16017; Klebs-Sudhoff, Pest.69A.]

73. Maimonides. Aphorismi medici. [With other tracts.] Bologna, Franciscus Plato de Benedictis, for Benedictus Hectoris, 4 Kal. June [29 May] 1489.
Quarto.
[H*10524.]
Incomplete.

74. Maimonides. Aphorismi medici. [With other tracts.] [Venice] Bonetus Locatellus for Octavianus Scotus, 7 Oct. 1497. [A close reprint, (with the colophon) ca. 1500, by Hamman Hertzog, of 2nd part of Locatellus' Rhazes. 7 Oct. 1497.]
Folio.
[BMC.v, 429.]

75. Maiolus, Laurentius. De gradibus medicinarum. Venice, [Aldus Manutius], 1497.
Quarto.
[H.10528; BMC.v, 557.]

76. Matthaeus Sylvaticus. Pandectae medicinae. Vicenza, Hermannus Liechtenstein, [1478–80.]
Folio.
[H*15193.]

77. Matthaeus Sylvaticus. Pandectae medicinae. Venice, Johannes de Colonia & Johannes Manthen Gheretzen, 6 Id. Oct. [10 Oct.] 1480.
Folio.
[H*15198; BMC.v, 237.]

78. Mensa Philosophica. [by Michael Scotus?] [Cologne, Conrad Winters de Homborch, 1480?]
Quarto.
[BMC.i, 250.]

79. Mesue, Johannes, junior. Opera medicinalia. Petrus de Abano. Additio in librum Mesue. Pavia, Franciscus de Sancto Petro, 23 Dec. 1478.
Folio.
[Osler-Scholderer 160.]

80. Metlinger, Bartholomaeus. Regiment der jungen Kinder. Augsburg, Johann Bämler, an S. Augustin tag, [28 Aug.] 1474.
Folio.
[Osler-Scholderer 49.]

81. Metlinger, Bartholomaeus. Regiment der jungen Kinder. Augsburg, Johann Schaur, am freitag vor Martini [10 Nov.] 1497.
Quarto.
[H.11130; Sudhoff (Pädiatrischen) xxvii.]

82. Michael Scotus. De procreatione et hominis phisionomia. [Treviso, Johannes Rubeus, 1483.]
Quarto.
[H*14546.]

83. Mundinus. Anatomia. Gentilis de Fulgineo. Reprobatio Mundini. [Leipzig, Martin Landsberg, ca. 1493.]
Quarto.
[H*11633.]

84. Nicephorus. Logica. [With other tracts.] Venice, Simon Bevilaqua, 30 Sept. 1498.
Folio.
[H*11748; BMC.v, 523.]

85. Nicolaus Salernitanus. Antidotarium. Venice, Nicolaus Jenson, 1471.
Quarto.
[H.11764; BMC.v, 170.]
Fragment.

85a. Nicolaus Salernitanus. Antidotarium. Abulcasis. Liber Servitoris. [Pavia, Franciscus de Sancto Petro, 1478–79.]
Folio.

86. Ortolff von Beyrlandt. Arzneibuch. Nuremberg, Anton Koberger, Montag nach Mitter vasten [17 Mar.] 1477.
Folio.
[H*12112; BMC.ii, 414.]

87. Petrarca, Franciscus. De remediis utriusque fortunae. Cremona, Bernardinus de Misintis & Caesar of Parma, 17 Nov. 1492.
Folio.
[H*12793.]

88. Petrus de Abano. Conciliator differentiarum philosophorum. Venice, Bonetus Locatellus for Octavianus Scotus, Ides Mar. [15 Mar.] 1496.
Folio.
[H*4.]

89. Petrus Hispanus. Summula logica cum Versoris expositione. Venice, Bonetus Locatellus for Octavianus Scotus, 4 Ides Quint. [12 July,] 1496.
Folio.
[H.8693; R.v, 143.]

90. Petrus Lombardus. Liber sententiarum. [Basel, Bernhard Richel, ca. 1482.]
Folio.
[H*10185; BMC.iii, 739.]

91. Platina, Bartholomaeus Sacchi. De honesta voluptate et valetudine. Venice, Bernardinus Venetus de Vitalibus, 1498.
Quarto.
[H.13055; BMC.v, 548.]

92. Plinius Secundus, Caius. (the elder) Historia naturalis cum castigationibus Hermolai Barbari. Venice, Johannes Alvisius de Varisio, 18 May 1499.
Folio.
[H13104; BMC.v, 572.]

93. Plinius Secundus, Caius Caecilius. (the younger) Epistolae. Treviso, Johannes Rubeus, 1483.
Quarto.
[H*13113.]

94. Politianus, Angelus. Opera omnia. Venice, Aldus Manutius, July 1498.
Folio.
[H*13218; BMC.v, 559.]

95. Praepositi, Nicolaus. Dispensarium ad aromatarios. [Lyons, Matthaeus Huss, *ca.* 1499.]
Folio.
[H*13324.]

96. Prognosticon in mutationis aeris tam via astrologica quam metheorologica. Hippocrates. De medicorum astrologiae. Venice, Erhard Ratdolt, [before 4 Nov.] 1485.
Folio.
[H.13393; R.iii, 160; BMC.v, 291.]

97. Regimen Sanitatis. Die Schul zu Paris dem Konig von Engellandt. [Leipzig, Conrad Kachelofen, *ca.* 1495.]
Quarto.
[R. 1045.]

98. Regimen Sanitatis Salernitanum. Arnoldus de Villanova. Expositio in regimine sanitatis. [Venice, Bernardinus Venetus de Vitalibus, *ca.* 1500.]
Quarto.

99. Regimen Sanitatis. Salernitanum. Arnoldus de Villanova. Expositio in regimine sanitatis. Venice, Bernardinus Venetus de Vitalibus, [*ca.* 1500].
Quarto.
[R.708.]

100. Regimen Sanitatis Salernitanum. Arnoldus de Villanova. Expositio in regimine sanitatis. Paris, Michel le Noir, 15 Kal. Dec. [17 Nov.] 1497.
Quarto.
[H.13762; Pell. 1299.]

101. Regimen Sanitatis Salernitanum. Arnoldus de Villanova. Expositio in regimine sanitatis. [Lyons, *ca.* 1490–1500].
Quarto.
[Pell. 1288.]

102. Rhazes. Libri X ad Almansorem. Manfredi, Hieronymus. Centiloquium de mediciis et infirmis. Venice, Johann Hamman Hertzog, 19 Feb. 1500.
Folio.
[H. 13905; R. 1854.]

103. Rhazes. Liber nonus Almonsoris cum expositione Sillani de Nigris. Petrus de Tussignano. Receptae supranonum Almonsoris. Venice, Bernardinus Stagninus de Tridino, 30 Mar. 1483.
Folio.
[H*13895; BMC.v, 364.]

104. Rhazes. Liber nonus Almonsoris cum expositione Sillani de Nigris. Petrus de Tussignano. Receptae supra nonum Almonsoris. Venice, Otinus de Luna. 12 Kal. Aug. [21 July] 1497.
Folio.
[H*13897; BMC.v, 569.]

105. Savonarola, Johannes Michael. Canonica de febribus. Bologna, Dionysius Bertochus, 8 Mar. 1487.
Folio.
[H.14487.]

106. Savonarola, Johannes Michael. Canonica de febribus. Venice, Christophorus de Pensis de Mandello, 16 Oct. 1496.
Folio.
[H*14488; BMC.v, 470.]

107. Savonarola, Johannes Michael. De balneis et termis naturalibus. Ferrara, Andreas Beaufort Gallus, 10 Nov. 1485.
Folio.
[H*14493.]

108. Savonarola, Johannes Michael. Practica de aegritudinibus. Venice, Bonetus Locatellus for Octavianus Scotus, 5 Kal. July, [27 June], 1497.
Folio.
[H*14484; BMC.v, 448.]

109. Savonarola, Johannes Michael. Summa de pulsibus, urinis et egestionibus. Bologna, Hendrik of Harlem & Johann Valbeck, 8 May 1487.
Folio.
[H*14490.]

110. Seneca, Lucius Annaeus. Epistolae. Opera philosophica. [Seneca, Marcus Annaeus (the elder).] Suasoriae. Controversiae. Venice, Bernardinus de Choris de Cremona, 31 Oct. 1492.
Folio.
[H*14594; BMC.v, 466.]

111. Serapion, Johannes. Breviarium medicinae. Liber aggregatus in medicinis simplicibus. [With other tracts.] Venice, Bonetus Locatellus for Octavianus Scotus, 17 Kal. Jan. [16 Dec.] 1497.
Folio.
[H*14695; BMC.v, 448.]

112. Simon a Cordo Januensis. Clavis sanationis. Venice, Guilelmus Anima Mia de Tridino, 13 Nov. 1486.
Folio.
[H*14749; BMC.v, 410.]

113. [Sprenger, Jacobus et Institoris, Henricus.] Malleus maleficarum. Nuremberg, Anton Koberger, 17 Mar. 1494.
Quarto.
[H*9245; BMC. ii, 438.]

114. Valescus de Taranta. Practica medicinae. Lyons, Johannes Trechsel, 19 May 1490.
Quarto.
[H*15250.]

115. Valescus de Taranta. Practica medicinae. Johannes de Tornamira. Introductorium medicinae. [Lyons], Nicolaus Wolff 10 Mar. 1500.
Quarto.
[H*15252.]

116. Vincentius Bellovacencis. Speculum naturale. [Strassburg, Printer of Legenda Aurea (Martin Flach?), 1481–83.]
Folio.
[BMC. iii, 860 (no description).]

117. Zerbus, Gabriel. Quaestiones metaphysicae. Bologna, Johann Valbeck & Hendrick of Harlem, Kal. Dec. [1 Dec.] 1482.
Folio.
[H*16285.]

[From Nüremberg Chronicle, 1493.]

MEDICAL INCUNABULA IN THE LIBRARY OF WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

GORDONIO [BERNARDUS DE] Practica. Gordonij dicta Lilium Tractatus eiusdem De vrinis. Impressus Venetijs madato expensis Nobilis Viri dni Octaviani Scoti Ciuis Modoetiesis Per Bonetu Locatellus Bergomensem Anno falutis Nonagesimo octavo supra Milesimum quaterqz centisimuz Undecimo Kalendas Ianuarias Augustino Barbadico Inclyto Venetiarum duce. [1498]
2 col. 65 l. 96 et 33 ss. num. c. litt. initial. florent
[Hain.]

KAMINTUS, EPISCOPUS ARUSIENSIS [attribution]: Regimen contra pestilentiam sive epidemiam.
Quarto. [Leipzig], Arnold of Cöln [*circa* 1493].
[Reichling, 581.]

LEONICENUS, NICOLAUS. Libellus Epidemia quam vulgo. Venetiis In domo Aldi Manutii. Mense Iunio. M. iii. D. [1497]
4 r. 28 ss. c. marginal.
[Hain.]

MESUE, JOHANNES. Mesue cum additionibus Francisci de pedemontium. Et additionibus Petri de Apono. Et cum commento Dini super Cano generales. Et cum cometo Christophori de honestis sup antidotariu Mesue Platearius super antidotariu Nicolai Et Saladinus de componendis medicinus. Venetiis, 1491.
2 col. 60–59 l. 46, 38, 244 et 29 ss. male num. et 1 s. non num.
[Hain.]

Regimen sanitatis Salernitanum, cum expositionibus Arnoldi de Villanova.
Quarto. Venezia Bernardinus de Vitalibus [*circa* 1500].
[Reichling VI, 136; Copinger 5053; Pellechet 1289.]

MEDICAL INCUNABULA IN THE MEDICAL LIBRARY OF THE UNIVERSITY OF ROCHESTER*

ARCULANUS. Expositio in primam. Fen quarti canonis Avicenne. Venice, Locatellus, 1496.
[Hain No. 1553.]

ARNOLDUS DE VILLA NOVA. Breviarium practice medici Venice, Otinus de Luna, 1497.
[Hain No. 1802.]

BARTHOLOMEUS DE GLANVILLA [Bartholomeus Anglicus] De proprietatibus rerum. Np, de Lubeck, 1483.
[Hain No. 2504.]

SALICETO (GUILIELMUS DE). In nomine Domini . . . liber Gulielmi placentini de Saliceto, in scientia medicinali: et specialiter perfectis incipit: qui summa conservationis et curationis appellatur. Venetiis (de Gregoriis) 1490.
[Hain No. 14145.]

* List compiled by Dr. G. W. Corner, Chairman of Library Committee.

[From Nüremberg Chronicle, 1493.]

[From Petrus Franciscus Phrygius: Commentarii. Lugduni, 1644.]

EDITORIAL

MEDICAL INCUNABULA

There is no more striking demonstration of the increasing attention paid to medical history in this country than the great growth of interest in the bibliographic aspects of medicine which is manifest on every side. As in most other fields of medical culture this interest owes its chief development to the late Sir William Osler, and surely he would have wished no better monument to his memory than the great collections of medical classics which are now considered a necessary part of every large medical library. A short time ago the Library of the New York Academy of Medicine was enriched by acquiring possession of the magnificent collection formed for his own delectation by Dr. Edward C. Streeter, of Boston, and the Boston Medical Library and that of Rochester have gathered together in recent years a great store of invaluable medical classics.

Until comparatively lately such collections in this country were unusual. The Library of Transylvania University is still intact. The books had been gathered in the very early years of the nineteenth century and the collection included many of great value. The Library of the College of Physicians of Philadelphia had the good fortune to receive in 1864 from one of its Fellows, Dr. Samuel Lewis, a gift of 2600 volumes, most of them of great rarity. This formed the nucleus of its collection of incunabula and other rare works, which has grown slowly but steadily with the passing years. The John Crerar Library in Chicago also contains a notable collection of medical classics formed some years ago. The magnificent collection in the Library of the Surgeon General remains the greatest library of this kind in the United States.

Besides the libraries belonging to institutions there are many most notable collections made by private individuals. That of Dr. Streeter was one of the chief in this category, but Harvey Cushing, Leroy Crummer, and others might be mentioned who are continually adding to their stores and rescuing from oblivion works which possess an inestimable value to those interested in the cultural aspects of medicine.

In 1911 Fielding H. Garrison, ever ready to offer practical assistance to those who are interested in medical history and bibliography published a valuable little pamphlet entitled "How to collect old Medical Books in Europe, where to go and what to look for." In it he directed attention to the opportunities which were then, and still are, offered to the would be collector, of picking up rarities in some of the byways and out-of-the-way places on the Continent. At the end he published what he aptly calls, a "miniature Baedeker for medical bibliophiles," a list of antiquarian booksellers, whose shelves afford opportunities for the collector. There is no doubt that many have read this little book and have frequented the haunts to which he refers, returning to this country in many instances laden with spoils of worth.

Some years ago the ANNALS published lists of the incunabula contained in some of the medical libraries of the United States. From the interest manifested in them by our readers we have judged it wise, in view of the large accretions made to many collections since that time, to issue once more such lists as the various libraries may send us, thereby aiding bibliographers to locate the treasures which are on the shelves of institutions in this country. We will be glad to receive any such lists which may be sent to us for publication and hope that the result may be of value to those concerned in forwarding interest in medical bibliography in this country. FRANCIS R. PACKARD.

BOOK REVIEWS

The Modern Dance of Death. By Peyton Rous. The Linacre Lecture, 1929. Cambridge Univ. Press (N. Y., Macmillan).

During the Middle Ages and throughout the Renaissance there was no more popular topic for pictorial representation than that of death, in the form of an écorché or skeleton, about to seize his victim in the midst of his worldly avocations. Death was generally depicted in a somewhat fantastic attitude, sometimes dancing or playing a musical instrument, but always with a grim masterful deportment. The destined victim to whom he appeared might be an emperor, king, pope, rich man, priest, doctor, or any other type of humanity. That there is a perennial interest in the Dance of Death pictures is shown in the fact that they continue to be put forth by artists to the present day, the World War having been the subject of quite a number, though the output is not nearly so great as some centuries ago.

So far as we know Dr. Rous is the first to utilize these conceptions as the basis for a philosophical study of the difference between death as it appears to the modern man and what it must have seemed to his ancestors. Death is no longer regarded "as an irresistible leveller." Man knows how often his activities can be delayed. "Only in the series which deal with the War does one find the old fatalism." Today the average span of life is twice as long as in Linacre's times. "Even at the end of the eighteenth century only nine individuals out of the hundred lived to be fifty instead of more than half the number as now happens." As a result the thought that they must die no longer occupies so prominent a place in the minds of younger persons because they are subconsciously aware that they enjoy a longer expectation of life. Such generalizings precede a careful consideration of the changes which have been brought about in recent times in the morbid activities which may cause death. Dr. Rous points out that though modern therapeutic measures have greatly modified many manifestations of disease, curing or producing mitigation of symptoms, or prolongation of life, nevertheless the disease remains essentially the same. A number of general diseases are so influenced as to radically change their manifestations and possible outcome. "Only a little while ago patients with pernicious anaemia were kept alive by transfusing them, and the end sometimes became a choice between death from the original anaemia or from induced haemolysis of the strange blood . . . and it is conceivable that diabetics preserved by insulin will eventually die of processes implicit in this malady but not encountered previously because life did not last sufficiently long." Rous shows that the surgeon has learnt that much harm is wrought by the removal of organs deemed unnecessary, such as the gallbladder, and that the functions of most organs are complex and not limited to one activity. He deals with the difficult problems presented by the unknown factors existing in the blood and tissues of individual animals as well as man which thwart efforts at transplantation and shows unfortunate limitations of replacement of most organs. Thus the rapid development of modern surgery has shown remarkable possibilities but also brought forth distinct limitations depending on the physiological reactions inherent in the tissues and organs. In the effort to combat disease and increase health and strength every accessible organ of the body has been "meddled with" in one way or another. A hundred years ago, Rous says, the potentialities of the human organism must have seemed what they had always been; now man is engaged for "the first time under favorable conditions, in a calculated exploitation of his own resources." Knowledge of the mode of conveyance of infectious diseases has been carried to such a point that many of them have been mastered in large areas, nevertheless the diseases remain the same. After man has mastered even vastly greater knowledge of diseases and disease processes the body will remain the same, and when the "major involution" of old age comes its manifestation will be the same as heretofore. The child of the future will be brought into an existence largely safe-guarded for him, but in turn he will be required by society to do much to protect his body from morbid influences; "already life has become to no inconsiderable extent a system of ordered avoidances. The requests not to spit, not to cough, not to sneeze, become daily more imperative" . . . "We have now advanced to a state in which anything perceptibly affecting physical or moral health is reprobated. A little time and it will take its place among the vices."

We have devoted much space to this little book and given some lengthy abstracts from it because of its peculiarly original character and the philosophic basis upon which Dr. Rous has developed his subject. It deserves careful study by all those interested in the most recent scientific developments because it discusses their underlying, fundamental principles, and it is like a trumpet call to sanity in the judgement of them. Dr. Rous has shown great skill in condensing a vast amount of valuable information with highly original commentary into a very limited space.

Francis R. Packard.

The History of Hemostasis. By Samuel Clark Harvey, M.D. N. Y., Paul B. Hoeber, Inc., 1929.

A splendid little book giving the history of hemostasis in an interesting and informative manner. Every page is instructive. The author gives evidence of having consulted numerous historical works.

Some of the illustrations depict many ancient instruments and appliances. Others demonstrate inaccurate knowledge of the distribution of blood vessels.

This brief but comprehensive history shows how the technic of hemostasis improved with better knowledge of anatomy in general and the work of Lister and Pasteur.

Many men may be surprised that the modern artery clamp has been in use but a half century. In 1880 not more than a half dozen clamps were used for an operation, in fact few American hospitals then possessed a larger number.

The book commends itself to those who are interested in medical history. We believe it should have a place in the libraries of many physicians.

Edward J. Klopp.

se it dis-
ndamental
oet call to
hem. Dr.
ondensing
formation
ry into a

CKARD.

3y Samuel
3. Hoeber,

ving the
nteresting
y page is
evidence
historical

ict many
opliances.
nowledge
vessels.
e history
emostasis
e of ana-
of Lister

that the
n in use
not more
used for
American
number.
to those
history.
ce in the

Klopp.

VOL. 2 1930 NO. 4 · JULY

ANNALS OF MEDICAL HISTORY

FRANCIS R · PACKARD · M · D · EDITOR [PHILADELPHIA]
PUBLISHED BIMONTHLY BY PAUL · B · HOEBER · INC
SEVENTY-SIX FIFTH AVENUE · NEW YORK · N · Y ·

TRUDEAU
SANATORIUM
MEDICAL

Entered as second class matter June 2, 1917, at the post office at New York, N. Y., under the Act of March 3, 1879.
Yearly Subscription, $10.00. Single numbers, $2.50

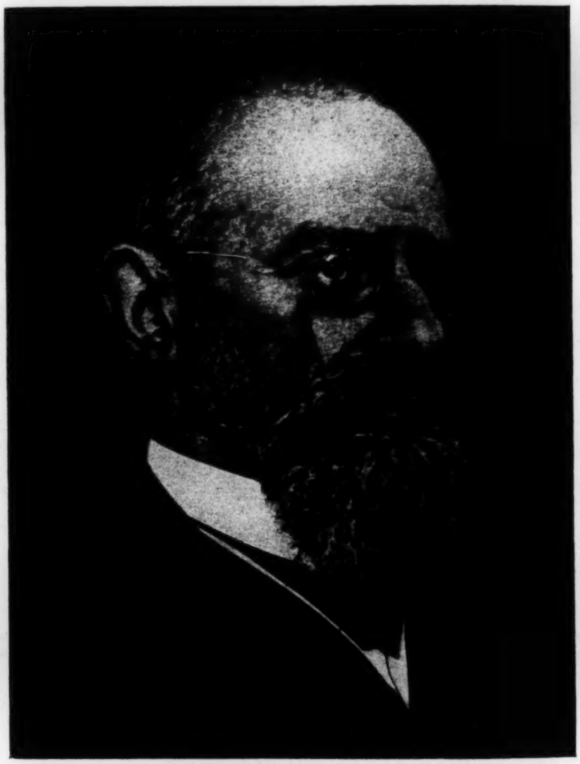
ANNALS OF MEDICAL HISTORY

Editor: FRANCIS R. PACKARD, M.D., Philadelphia

CONTENTS OF NEW SERIES, VOLUME ONE, 1929

Thompson, Strenuous Life of a Physician in the 18th Century; Johnson, William Potter Memorial Lecture. Introductory; Cohn, Development of the Harveian Circulation; Burger, Appreciation of the Medical Profession and the Divine Origin of Medicine; Chance, Squier Littell, m.d., Krumbhaar, Bibliographical Matters Pertaining to the Discovery of the Circulation of the Blood; Wood, Martin Lister; Woolf, Homerian Epoch; Harvey, History of Hemostasis; Miller, William Beaumont and His Book; Burr, Dr. James and His Medical Dictionary; Moore, Gabriel Honore de Riqueti; Roddis, Garcia da Orta; Riese, Arnold Adolf Berthold; Toomey, First General Medical Treatise Published in the Western Hemisphere; Peachey, John Fewson; Power, Memorial Group of the Harvey Family; Krumbhaar, Bath Olivers—Doctor and Biscuit; Wood, Julius Millingen; Robertson, "Castel of Helth" and its Author, Sir Thomas Elyot; Adler, Albrecht von Graefe; Parsons, Haitian Medicine; Hammett, Anatomical Knowledge of the Ancient Hindus; Gudger, Illustrations of Comparative Osteology; Bitter, Charles Edward Isaacs; Walsh, Date of Galen's Birth; Pitfield, A Pitiful, Rickety, Gasping, Staggering, Stuttering Tomfool; Miller, Diseases of Ancient Man; Crummer, Copy of Jenner Note Book; Strecker, Reminiscences from the Early Days of the Pennsylvania Hospital; Wiese, Larrey; Garrison, Brief Notes on Medical Philately; Pilcher, Epilepsy in the Light of History; Pool & McGowan, Surgery at the New York Hospital One Hundred Years Ago; Rolleston, Samuel Johnson's Medical Experiences; MacPhail, Evolution and Life; Middleton, Philip Syng Physick; Taylor, S. Weir Mitchell; Wagoner, Statuette Depicting a Posterior Superior Dislocation of the Hip; Weeks, David Ramsay; Waring, Incident in Early South Carolina Medicine; Todd, Medieval Physicians; Friedenwald, Manuscript Copies of the Medical Works of Isaac Judaeus; Diploma of a Jewish Graduate of Medicine of the University of Padua in 1695; Brunschwig, Hieronymus Brunschwig; Shryock, Origins and Significance of the Public Health Movement in the United States; Pleadwell, Ninian Pinkney, m.d.; Moodie, Surgery in Pre-Columbian Peru.

Frontispiece
Annals of Medical History
July, 1930



ANeisser